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ABSTRACT

This monograph reviews the history and current relevance of work sharing and assesses the issues, policy options, job creation potential, and likely social and economic impacts related to the concept. Chapter 1 overviews work sharing in the past and work sharing as an alternative to the problem of unemployment in the future. Chapter 2 reviews issues of work sharing. These considerations are consolidated into the categories of impacts on productivity and price stability, job creation and preservation, level of participation and aggregate employment impact, social equity and targetability, flexibility of implementation and termination, administrative costs and regulatory effectiveness, and secondary social concerns. Chapter 3 focuses on seventeen public policies designed to redistribute existing and prospective employment opportunities through work sharing. They are grouped into four major categories: (1) subsidized worktime reductions (6 policy options), (2) limitation of worktime (5 options), (3) long term time-income trade-offs (4 options), and (4) voluntary time-income trade-off options for individuals (2 options). Chapter 4 compares work sharing options and then compares the most promising with other approaches to combatting unemployment. (YLB)

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WORK SHARING

Issues, Policy Options and Prospects

FRED BEST

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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THE INSTITUTE, a nonprofit research organization, was established on July 1, 1945. It is an activity of the W. E. Upjohn Unemployment Trustee Corporation, which was formed in 1932 to administer a fund set aside by the late Dr. W. E. Upjohn for the purpose of carrying on "research into the causes and effects of unemployment and measures for the alleviation of unemployment."

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The Author

Fred Best is currently directing a special evaluation of work sharing for the California Employment Development Department in Sacramento. He previously held positions with the U.S. Department of Labor, the National Commission for Employment Policy, the U.S. Department of Commerce, and the U.S. Department of Health, Education and Welfare.

Dr. Best has published widely concerning the changing nature of work. His books and monographs include *The Future of Work, Exchanging Earnings for Leisure, Shared Work Compensation,* and *Flexible Life Scheduling.* His articles have appeared in journals such as *Monthly Labor Review, Social Forces,* and *Aging and Work.* His other areas of research include policy development and evaluation, social indicators, education, family life, and aging and retirement.

Dr. Best holds a B.A. in economics and history and M.B.A. from the University of California at Berkeley, and a Ph.D. in sociology from the University of Massachusetts at Amherst.

Dedicated with love and admiration
to my wife, Francine Corton

Foreword

Relatively high levels of unemployment, together with other social and economic developments, have resulted in increased interest in work sharing. Although the concept is far from new, it has emerged as an increasingly viable alternative solution to the problems of unemployment, both at the firm level and from a public policy perspective.

A broad array of specific approaches has been proposed under the concept of work sharing. The strategies range from specific proposals that are designed as short term efforts to avert layoffs and dismissals to long term methods for alleviating unemployment by creating jobs for the unemployed through reduced worktime.

In this monograph, Dr. Best provides an excellent review of the history and current relevance of work sharing and assesses the issues, policy options, job creation potential, and likely social and economic impacts related to the concept. In the author's opinion, the primary issues for the future relate to the scope of work sharing and the alternative forms that it may take.

Facts and observations presented in this monograph are the sole responsibility of the author. His viewpoints do not necessarily represent the positions of the W.E. Upjohn Institute for Employment Research.

E. Earl Wright
Director

Kalamazoo, Michigan
April 1981

Preface and Acknowledgments

This monograph has been prepared with the hope of widening the scope of discussion given to work sharing. Over the last several years, debate about work sharing has emerged on many occasions. Unfortunately, attention given to this topic has generally taken the form of advocacy for and opposition to very specific approaches. As a result, many people have come to view work sharing as taking only one particular form rather than as a generic concept. First and foremost, this volume is intended to encourage readers to think of work sharing as the general idea of reducing worktime in order to spread employment, and second, to recognize that there are many approaches to this general objective. I hope that the pages that follow will serve to broaden the debate on work sharing so that awareness of available options progresses hand-in-hand with the social and political pressures which may catalyze interest in sharing work during coming years.

Yet another hope for this volume is that it will help in the isolation and understanding of the social and economic forces that will determine the viability of the most promising forms of work sharing. Proponents have all too frequently paid inadequate attention to the very real economic costs and institutional constraints that can neutralize the proposed benefits and applicability of work sharing. Correspondingly, even highly trained and sophisticated opponents have frequently dismissed all work sharing as a "defeatist strategy" without adequate attention to specific proposals or the currents of social change which may make such programs both advisable and viable. Work sharing, like all prospective areas

of public policy, will succeed or fail within a complex web of technical, economic and social conditions. Some effort has been made in this volume to isolate and examine these conditions.

The topic of work sharing is, for the most part, a largely unexplored issue. While there is a growing literature, empirical grounding is sparse and most analysis is largely theoretical and speculative. This is also true for this volume. Thus, I urge readers to be aware that some of the judgments made in this monograph may be subject to reappraisal as empirical research progresses.

I am most grateful to the W.E. Upjohn Institute and its Director, E. Earl Wright, for providing the opportunity to publish this study. The contents represent thoughts and writings that have been in various stages of partial completion for some time, and the support of the Institute provided a most welcome impetus to define and consolidate this material.

A particular note of appreciation is due the Organization for Economic Co-operation and Development in Paris. During May 1979, their support enabled me to complete the initial stages of this volume in the form of a paper titled, "Work Sharing: Policy Options and Assessments." They have graciously agreed to let me use portions of the paper for this monograph.

Numerous other persons and institutions have contributed to the research activities which led to this volume. Foremost, Isabel V. Sawhill, the past Director of the National Commission for Employment Policy, played a critical role by providing the guidance and resources necessary for me to explore the topic of work sharing while serving as an Associate at the Commission. It must be said that she has always expressed grave reservations about the viability of work sharing, but that she has been thoroughly committed to the goal

of insuring an honest and open debate on the topic. Additionally, Barry Stern of the U.S. Department of Education has conducted and guided much of the initial research on the issue. Others who have generously helped with technical advice, data and encouragement include Lennart Arvedson, Patsey Fryman, Janice Hedges, William Greene, Peter Henle, Linda Ittner, Gary Lefkowitz, James Mattesich, Maureen McCarthy, Gail Rosenberg, Robert Rosenberg, Frank Schiff, Alfred Tella, Joyce Radke, Howard Rosen, Bernhard Teriet, Gordon Winston, James Wright, Casey Young and John Zalusky.

Needless to say, the contents of this volume represent only the views and interpretations of its author, and do not necessarily reflect the opinions or policies of any of the institutions or persons who have made its preparation possible.

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CHAPTER 1
The History and Current Relevance of Work Sharing

Persistence of high unemployment over the last several years has led many persons to advocate worktime reduction as a means of combating joblessness by spreading work among a larger number of persons. Proposed approaches for sharing work have varied tremendously, including mandatory reduction of the workweek with and without pay loss to employees, various forms of earlier retirement and prolonged schooling, extended vacations and worker sabbaticals, long term exchange of prospective economic growth for worktime reductions, increased part-time employment, and stimulation of voluntary exchange of current earnings for more free time.

To date, discussion of work sharing has been somewhat unproductive; it has been diffused on one side by commitments to more traditional job creating policies, complicated by tendencies to conceptualize work sharing as taking the form of only one of the many possible approaches, and overly generalized by a lack of specific policy proposals which might be rigorously assessed. This volume will seek to better focus discussion by building upon available thought and research to outline the history of work sharing, discuss-

ing the current relevance of sharing work, synthesizing the observations that should be considered in evaluating work sharing policies, describing and provisionally evaluating leading policy options, and finally seeking to assess the viability of the most promising options in comparison to other employment policies.

WORK SHARING IN THE PAST

Although the idea of sharing work has always been controversial,[1] it is important to recognize that industrial societies have consistently applied policies to reduce and ration worktime as a means of combating joblessness. In a very general sense, there are two basic forms of work sharing. The first type is usually restricted to specific firms and used as a short term strategy to prevent layoffs and dismissals by temporarily reducing worktime. As an example, employers and employees in a given firm may decide to reduce the workweek and earnings for a short period by 10 percent as an alternative to laying off one-tenth of existing workers. Interestingly, about one-fourth of existing collective bargaining agreements have formal provisions for such work sharing.[2] The second type of work sharing seeks to reduce worktime among the employed in order to create jobs for those who are unemployed, thus distributing available work more evenly among a larger number of persons. This second type has been used to combat unemployment caused by long range conditions which are likely to persist beyond the periodic downswings of the business cycle.

While efforts to gain more free time have been a concern of labor movements dating back to the 18th century, the notion of reducing worktime in order to share employment made its most obvious appearance in 1887 when Samuel Gompers, the President of the American Federation of Labor, declared that, "As long as we have one person seek-

ing work who cannot find it, the hours of work are too long." To what degree such comments reflected the intent to combat joblessness as opposed to a desire to justify the reduction of work hours remains an open question. Nonetheless, Gompers' position was embraced as a major justification for the series of worker movements to shorten the workweek which took place between the late 19th century and the 1930s.

The "Great Depression" of the 1930s fostered the first widespread and explicit efforts to reduce worktime in order to spread employment. As unemployment rose to crisis proportions, employers sought to ease the burden of job loss by shortening workweeks as an alternative to laying off employees in an era when there was no unemployment insurance and great aversion to the few welfare programs that did exist.[3] The Hoover Administration made such work sharing the centerpiece of its effort to control unemployment which was soaring over 20 percent. At the request of President Hoover, New Jersey Standard Oil President Walter Teagle toured the nation advocating worktime reductions in order to save jobs.[4] Even though this general concept was endorsed by President of the American Federation of Labor, William Green,[5] the work sharing concept became unpopular among workers. Although it was often accepted as the best of undesirable options, worktime reductions were often extensive, accompanied by major pay cuts, and regarded as symbolic of a depression which many workers viewed as the creation of the business community and the Hoover Administration.[6] This resentment was summarized aptly by one critic's comment that work sharing was a device by which "industry is asking labor to bear the major costs of unemployment relief."[7]

After 1932, Franklin D. Roosevelt's "New Deal" made multifaceted initiatives to combat joblessness and economic hardship. The approaches used included macroeconomic

"pump priming," major public job creation, unemployment insurance and other income maintenance programs, and new forms of work sharing that were more palatable to workers. Social Security, a self-proclaimed hallmark of the Roosevelt Administration, was passed in 1935 primarily to insure retirement with dignity, but also to reduce the number of persons seeking jobs.[8] A more direct work sharing policy dealt with limiting the workweek. The Black-Connery Bill, which limited the workweek to 30 hours, passed the Senate but was defeated in the House during 1933.[9] Five years later, Roosevelt signed into law a more flexible work limiting approach in the form of the Fair Labor Standards Act of 1938.[10] This act sought to spread employment by defining the standard workweek as 40 hours and imposing a time-and-a-half overtime pay premium for time worked over this standard workweek. While available data indicate that predepression collective bargaining followed by massive work sharing during the years immediately preceding passage of this act had driven the average workweek down to the neighborhood of 40 hours (see table 1-1),[11] this measure appeared to encourage new hiring as an alternative to overtime and has come to be regarded as the single most dramatic public policy to foster the sharing of employment.

World War II and the subsequent years of economic progress fostered little in the way of overt work sharing, but gave rise to conditions which have had a subtle effect on worktime trends and the distribution of employment within the United States. First, the combination of tax law incentives for fringe benefits and occasional wage-price freezes gave rise to an ongoing multi-decade trend toward increasing fixed labor expenditures on retirement pensions, health care, paid time-off and other nonwage compensation. In addition to increasing free time, particularly in the form of earlier retirements, expenditures on such benefits are, for the most part, fixed so that their costs to employers for every hour of

Table 1-1
Average Length of Workweek
Selected Years and Industries, 1909-1978

Year	Average hours of work per week			
	Total private	Manufacturing workers	Construction workers	Retail trade workers
1909	—	51.0	—	—
1920	—	47.4	—	—
1925	—	44.5	—	—
1928	—	44.4	—	—
1929	—	44.2	—	—
1930	—	42.1	—	—
1932	—	40.5	—	—
1934	—	38.3	28.9	41.5
1936	—	34.6	32.8	43.5
1938	—	39.2	32.1	42.6
1940	—	35.6	33.1	42.5
1942	—	38.1	36.4	41.1
1944	—	42.9	39.6	40.4
1947	40.3	40.4	38.2	40.3
1950	39.8	40.5	37.4	40.4
1955	39.6	40.7	37.5	39.0
1960	38.6	39.7	36.7	38.0
1965	38.8	41.2	37.4	36.6
1970	37.1	39.8	37.3	33.8
1975	36.1	39.5	36.4	32.4
1978	35.8	40.4	36.9	31.0

NOTE: Discontinuities of data collection method do not allow strict comparability of figures for years prior to 1947.

SOURCE: Workweek data for 1947 to 1978 cited from *The Employment and Training Report of the President,* U.S. Department of Labor, Washington, DC, 1979, p. 322. Workweek data for years prior to 1947 from multiple sources cited from *The Statistical History of the United States from Colonial Times to the Present,* Fairfield Publishers, Stamford, CN, 1965, pp. 92 and 94.

labor received increases as the job time of individual workers declines. Thus, the increase of such fixed expenditures on fringe benefits has become a growing barrier to worktime reductions.[12] Second, the growth of income maintenance programs such as unemployment insurance and welfare have tended to encourage many persons who experience difficulty finding employment to withdraw from the labor force.[13] Finally, social norms and some social policies were solidified which tended to discourage women from holding jobs. Such discouragement was certainly a phenomenon rooted deeply in the nature of traditional family organization, but up through the 1960s the work sharing implications of such restrictions were evidenced by the common expression that "women should not work because they might take jobs away from men who must support their families."[14]

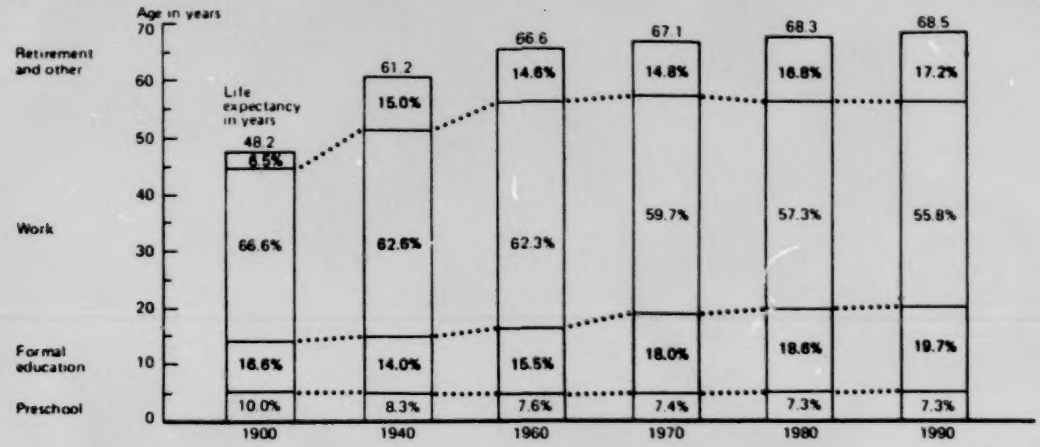
During the recessionary downturns of the 1960s, alarm over worker displacement due to automation[15] and the influx of the large post-World War II "baby boom" generation into the labor force revived interest in limiting the supply of labor to reduce unemployment. Collective bargaining efforts sought to reduce the workweek,[16] promote early retirement,[17] and instigate more exotic policies such as the U.S. Steel Sabbatical.[18] Public policies also sought to reduce the supply of labor to match the availability of jobs. An effort by organized labor to discourage overtime by increasing premium pay to double-time was narrowly defeated in the early 1960s.[19] More important, programs were developed to increase the school years of youth and retirement years of old age. While these programs had many social purposes, policymakers of this era freely acknowledge that an important goal of these programs was to reduce the size of the labor force.[20] These policies worked well. As one indication of their success, the percentage of the average U.S. male's total lifespan given to the nonwork activities of schooling and retirement increased from 35.5 percent in 1940 to about

43 percent in 1980 (see figure 1).[21] Generally high economic growth coupled with the somewhat subtle employment distribution impacts of these policies tended to downplay overt discussion of work sharing during this period.

The ultimate entrance of the "baby boom" generation into the labor force, dramatic increase of women workers, and high unemployment and limited job creation fostered by "stagflation" once again renewed open consideration of work sharing during the 1970s. During and since the 1975 recession, work sharing within individual firms occurred independent of government intervention in much the same way that it did during the 1930s.[22] Also serious consideration was catalyzed for "short-time compensation," a program used by European nations to provide partial UI benefits to workers put on reduced workweeks as an alternative to layoffs.[23] While several states have expressed interest in this concept, only California had implemented such a program by mid-1980.[24] Starting in 1977, a coalition of unions initiated a new drive to amend the Fair Labor Standards Act so that the standard workweek was redefined as 35 hours and the overtime premium was increased to double-time.[25] Correspondingly, many unions, most notably the United Auto Workers, reassumed their historic effort to reduce worktime via collective bargaining.[26] Finally, a range of novel and volunteeristic proposals have been put forth to share employment via public sabbaticals, expanded part-time jobs, voluntary programs allowing workers to trade earnings for reduced worktime, and nullification of legal barriers to worktime reduction.[27] In parallel fashion, many European nations have also developed serious policy interest in the potentials of work sharing in fighting joblessness.[28]

Clearly, work sharing is not a new idea. Both private and public policies have promoted various ways of sharing and distributing jobs. In many cases, work sharing has been fostered by a number of social forces in conjunction with

Figure 1
U.S. Men's Lifetime Distribution of Education, Work, and Leisure by Primary Activity, Actual 1900, 1940, 1960, 1970, and Projected 1980 and 1990



SOURCE: Worklife expectancy figures (number of years in labor force) obtained from Howard N. Fullerton and James J. Byrne, "length of Working Life for Men and Women, 1970," *Monthly Labor Review,* February 1976, pp. 31-33; and Howard N. Fullerton, "A Table of Expected Working Life for Men, 1968," *Monthly Labor Review,* June 1971, pp. 49-54. Life expectancy figures (at birth) obtained from *Statistical Abstracts of the United States, 1974* (Washington, DC: Bureau of the Census, 1975), p. 55. School years (completed for persons over 25) obtained from *Digest of Educational Statistics for 1975* (Washington, DC: U.S. Department of Health, Education and Welfare, Office of Education, 1975), pp. 14-15. Projected figures of worklife and life expectancy from unpublished computations provided by Howard N. Fullerton, Bureau of Labor Statistics. Projected years of education are estimates derived from *Current Population Reports,* Series 20, nos. 243 and 293, and Series P-25, no. 476 (Bureau of the Census).

unemployment; and in many cases the work sharing implications of social policies have been secondary but important considerations. Employment has indeed been shared and rationed within most industrial societies, and this has had profound impact upon the nature of unemployment and patterns of work and leisure. The main issue concerning work sharing is not whether or not to use it. Work sharing *is* already a reality. The issues for the future are how much work sharing to have, and what forms it should take.

WORK SHARING IN THE FUTURE

Aside from prolonged frustration over unemployment, economic and social circumstances within the United States and other industrial nations are contributing to interest in sharing work. On the economic side, there appears to be an emerging consensus that "stagflation" is likely to persist well into the 1980s. The tenacity of inflation has led increasing numbers of economists and policymakers to be wary of stimulating economic growth and job creation by macroeconomic demand management. As a result, optimistic speculations indicate real economic growth considerably below past norms and pessimistic forecasts of unusually low growth are commonly viewed as a realistic possibility.[29] This emerging acceptance of sluggish economic growth and limited job creation has fostered consideration of nontraditional employment policies, such as work sharing, as "second best" options for reducing unemployment within economies constrained by inflation.

On the social side, ongoing transitions in labor force composition and related changes in life styles are creating a climate which may be conducive to the use of work sharing. Demographic trends show that the large post-World War II "baby boom" generation has recently completed its entry into the labor force. This generation, which crowded schools

in the recent past, is now creating intense competition among its members and with other age groups for available jobs. Over the long run, the job seekers of this "baby boom" generation are likely to be absorbed by the labor market, perhaps leaving in their wake a labor shortage borne of smaller subsequent generations.[30] However, these adjustments will not occur overnight and labor force growth from other sources is likely to foster extremely intense competition for employment into the 21st century.

Most notably, the labor force participation of women rose from 32.7 percent in 1948 to 50.1 percent in 1978,[31] and it is likely to continue rising in coming decades.[32] As an indication of what may occur in the long run in the United States and other nations, the participation rate of women in Sweden is almost equal to that of men.[33] This increase of women will not only intensify labor market competition, but also tend to alter the worktime preferences and needs of tomorrow's labor force. As the proportion of dual-earner families increases along with women workers, the typical household of the future will experience tremendous time pressures in the performance of family responsibilities and pursuit of leisure activities.[34] At the same time, dual-earner families will have increased financial discretion to forego income-earning worktime for more free time.[35]

In addition to women workers, it appears likely that many older workers may resist retirement because of nervousness about the impact of inflation on fixed incomes.[36] This would block the promotion of younger persons and increase the size of the labor force. While it is still too early to claim an established trend in this direction, there are indications that the tendency toward earlier retirement may have halted.[37] Correspondingly, there are signs that while large portions of older workers prefer to remain employed past traditional retirement age, they also prefer to work less than full time.[38] For example, one representative survey of the American

labor force found that 28 percent of those aged 50 to 64 preferred to retire at age 65, 9.4 percent were undecided about their retirement plans, and that the remaining 62.3 percent wished to keep working. Some 84.6 percent of those wishing to work preferred to work either part-year or part-week.[39]

An overview of the increasing propensity to work among all persons comes from past and projected labor force participation rates. In short, the proportion of the U.S. population over age 16 who are either employed or looking for employment rose from 60.4 to 63.7 percent between 1970 and 1979, and is projected to rise to 67.9 percent by 1990 and 68.6 by 1995 (see table 1-2). While there has been speculation of future labor shortages due to the lack of entry level workers following the "baby boom" generation,[40] it is more likely that previously mentioned trends will far outweigh the lack of entry level workers. Indeed, labor economist Eli Ginzberg convincingly demonstrated that there were some 17 million persons in 1977 who would be likely to enter the labor force if the possibilities of finding a job increase.[41] Thus, it is quite likely that the labor force participation rate will grow faster than Bureau of Labor Statistics projections.[42]

In sum, a number of fundamental social trends are likely to foster a long term growth of labor force participation rates despite a scarcity of employment opportunities. However, while a larger portion of the U.S. and other populations may seek employment, increasing proportions are likely to prefer less than what we currently define as "full time" employment. In terms of employment policies, growth of labor force participation is likely to intensify the demand for more jobs, while preferences for reduced worktime may increase the acceptability of work sharing as a means of combating joblessness.[43]

Table 1-2
Actual and Projected Labor Force Participation, 1950-95

Year	Labor force participation rate	Total civilian labor force (000s)	Total civilian population (000s)
1950	59.2	62,208	104,995
1960	59.4	69,628	117,245
1970	60.4	82,715	136,995
1975	61.2	92,613	151,268
1978	63.2	100,417	158,942
1979	63.7	102,900	161,532
1985	66.5	115,000	172,850
1990	67.9	122,400	180,129
1995	68.6	127,500	186,034

SOURCE: Figures for 1950, 1960, 1970, and 1975 computed from *1977 Employment and Training Report of the President*, U.S. Department of Labor, p. 135, Table A-7; figures for 1978 computed from John Bregger and Kathryn Hoyle, "The Employment Situation," U.S. Bureau of Labor Statistics, Press Release 79-181, February 1979, p. 2; and projections for 1985, 1990, and 1995 cited from Howard N. Fullerton, "The 1995 Labor Force: A First Look," *Monthly Labor Review*, December 1980, pp. 11-21.

Persistent unemployment coupled with changing social conditions is likely to foster ongoing and growing interest in reducing worktime to combat joblessness. This interest notwithstanding, important policy questions must be answered concerning whether work sharing is a viable approach to the problems of unemployment. Would it actually create jobs? Would it be costly and inflationary? What types of secondary effects would it have?

NOTES

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3. Sar A. Levitan, *Reducing Worktime as a Means to Combating Unemployment,* The W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, 1964, pp. 1-2.

4. "Share the Work" in Arthur Weinburg and Lila Weinberg (Eds.), *Passport to Utopia: Great Panaceas in American History,* Quadrangle Books, Chicago, 1968, pp. 241-247; and J.W. Fagan, "Work Sharing Duringoa Depression," *Industrial Relations,* paper presented at a Conference on Industrial Relations, September 1938.

5. "Share the Work," p. 243.

6. Richard Lester, *Labor and Industrial Relations,* Macmillan, New York, 1951, p. 159.

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13. Melvin Reder, "Hours of Work and the General Welfare," in Clyde Dankert, et al. (Eds.), *Hours of Work,* Harper and Row, New York, 1965, pp. 179-200.

14. For some discussion of this issue, see Laurie Werner, "Where are Women Now?—Update from Eli Ginzberg," *Working Women,* December 1978, pp. 32-35.

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18. "Sabbaticals Become Major Goal," *Business Week,* October 13, 1962, p. 106.

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CHAPTER 2
The Issues of Sharing Work

Like all employment policies, work sharing is likely to entail costs, some of which may be increased or decreased by secondary impacts. These costs are likely to vary tremendously according to the specific approaches used. A major task in determining the viability of work sharing will entail estimating the costs of alternative work sharing approaches and comparing these costs to other job creation policies. This task is complicated by a lack of past experience and research on such policies, underscoring the need to proceed with caution.

It should be noted that worktime reduction as a cure for unemployment has been frequently proposed by individuals and groups primarily concerned with goals other than job creation or preservation.[1] Many of these nonemployment-related goals are laudatory and should be given due consideration in assessing the viability of alternative work sharing policies. Indeed, many of these secondary effects may, on their own, justify worktime reductions.[2] However, care must be taken to isolate the job creation and preservation potentials of work sharing policies from such impacts in order to rigorously assess their viability as employment policies.

Fruitful discussion of work sharing must be focused upon specific policy proposals and their implications. However, prior to such considerations, it may be useful to review a number of issues that have been isolated from existing literature on work sharing. Such a review can be synthesized into a criteria for assessing specific policy options which will be discussed later. This section consolidates these considerations into the categories of impacts on productivity and price stability, job creation and preservation, level of participation and aggregate employment impact, social equity and targetability, flexibility of implementation and termination, administrative costs and regulatory effectiveness, and secondary social concerns.

IMPACT ON PRODUCTIVITY AND PRICE STABILITY

There appears to be a general consensus that employment policies must cost little and be noninflationary for the medium range future. Work sharing has been criticized as highly inflationary as well as promoted as one of the few employment policies that might be pursued within the context of fiscal austerity. The reason for this disparity of opinions stems primarily from the fact that opponents and proponents have frequently focused their attention upon different work sharing policies. As such, it is increasingly necessary to assess the impact of specific alternative work sharing programs on productivity and price stability.

Ultimately, the impact of work sharing on productivity and price stability is likely to be determined at the firm or organizational level. Extra firm costs from work sharing would likely be added to the price of goods and services, which would foster inflation, be imposed on employees, or be assumed in some fashion by the government, to be funded by a reallocation of public revenues or potentially infla-

tionary fiscal expenditures. Thus it is at the firm or organizational level that assessments of the impacts of work sharing on productivity and price stability will be primarily focused.

Worktime Reductions Without Pay Loss

The greatest potential inflationary impact from work sharing would likely come from worktime reductions without commensurate reductions of pay. Under such circumstances, employers would either increase organizational efficiency so as to reduce labor needs and job creating impacts, or incur increased production costs which would result in lower profits and investment, higher prices and inflation, or lower total output and declining employment.[3] Government subsidy of worktime reductions taken in this fashion would also tend to foster inflation if resulting increases in fiscal expenditures were not matched by taxation. Clearly, worktime reductions without pay loss would either reduce productivity or increase inflation. The only reasonable exception to this expected impact would be if worktime reductions were obtained incrementally as a dividend of increased productivity and economic growth.

Increased Fixed Costs of Labor

An extra cost inherent in virtually all forms of work sharing stems from likely increases in employer expenditures on the fixed costs of labor. Most employers within the United States spend between 30 and 40 percent of base employee wages or salaries on labor costs including medical plans, paid holidays, some retirement pensions, certain payroll taxes, and training (see table 2-1).[4] Many, but not all, of these costs are fixed, thus representing expenditures for each employee regardless of length of worktime. As such, expenditures on the fixed cost portion of fringe benefits per hour of labor increase as worktime is reduced. As a rough illustration, 1974 data from the United States show that the average employer

Table 2-1
Fringe Benefits in Manufacturing, as a Percent of Payroll, 1953-1975

Year	Legally required payments (employer's share)	Pensions, insurance, ...	Paid rest (lunches, travel, and other non-worktime)	Pay for time not worked, vacations and holidays	Other items	Total fringe benefits
1953	3.4	4.5	2.1	5.4	1.4	16.8
1955	3.8	5.0	2.3	5.8	1.6	18.5
1957	4.1	5.8	2.4	6.5	1.5	20.3
1959	4.5	6.1	2.7	6.7	1.6	21.6
1961	5.5	6.8	2.8	7.2	1.3	23.6
1963	5.9	6.7	2.9	7.3	1.4	24.2
1965	5.3	6.7	2.7	7.2	1.7	23.6
1967	6.4	7.0	3.0	7.3	1.9	25.6
1969	6.8	7.6	3.1	7.8	1.7	27.0
1971	6.9	9.9	3.5	8.6	1.7	30.6
1973	8.3	10.2	3.5	8.5	1.5	32.0
1975	8.8	11.6	3.7	10.1	1.9	36.1

SOURCE: Fringe Benefits, and *Employee Benefits,* various issues, Chamber of Commerce of the U.S., Washington, DC, 1953-1975.

spent something like $60 a week on essentially fixed labor costs per employee.[5] Simple mathematical computations demonstrate that the hourly cost of labor increases with worktime reductions. Even if workers were willing to forego base wage or salary income proportional to worktime reductions, the average U.S. employee in 1974 would have cost approximately 33 cents an hour more if the workweek was reduced from five to four days, and about a dollar more an hour if the workweek was shortened to three days (see table 2-2).[6] When one considers the aggregate costs of significant worktime reductions for large numbers of employees, it becomes apparent that the extra expenses of adjusting worktime downward are notable.[7]

Even if workers were willing to forego or subsidize selected fringe benefits, training and certain payroll taxes would still insure that the cost of labor would be increased by virtually all forms of work sharing. However, it should be emphasized that these costs, while significant, may not be prohibitive. To illustrate, a reduction of the workweek from 40 to 32 hours with a commensurate hourly pay reduction but maintenance of all fringe benefits provided at a cost of 30 percent of total wages or salaries for the prior 40 hour workweek would lead to a 5.7 percent rise in total hourly labor costs. Further, the possibility of sharing such added expenditures among employers, workers and the government could attenuate resulting loss of productive efficiency, reduce inflationary impacts, and equitably distribute added costs.

Organizational Efficiency

It is likely that many employers would confront extra costs from organizational inefficiencies resulting from downward adjustments of worktime and accompanying increases of personnel. Presumably, growth of organizational workforces would require some increased expenditures for

Table 2-2
Dollar Costs per Hour for Fixed Costs of Labor by Variations of Worktime (standard workweek assumed to equal 40 hours)

Weekly work hours	1974 National average nonwage compensation[a] ($57.34)	Weekly fixed costs of labor[b]													
		$20	$30	$40	$50	$60	$70	$80	$90	$100	$110	$120	$130	$140	$150
60	.96	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
56	1.02	.36	.54	.71	.89	1.07	1.25	1.43	1.61	1.79	1.96	2.14	2.32	2.50	2.68
52	1.10	.38	.58	.77	.96	1.15	1.35	1.54	1.73	1.92	2.11	2.31	2.50	2.69	2.88
48	1.19	.42	.62	.83	1.04	1.25	1.46	1.67	1.87	2.08	2.29	2.50	2.71	2.92	3.12
44	1.30	.45	.68	.91	1.14	1.36	1.59	1.82	2.04	2.27	2.50	2.73	2.95	3.18	3.41
40	1.43	.50	.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75
36	1.59	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
32	1.79	.63	.94	1.25	1.56	1.88	2.19	2.50	2.81	3.13	3.44	3.75	4.06	4.38	4.69
28	2.05	.71	1.07	1.43	1.79	2.14	2.50	2.86	3.21	3.57	3.93	4.29	4.64	5.00	5.36
24	2.39	.83	1.25	1.67	2.08	2.50	2.92	3.33	3.75	4.17	4.58	5.00	5.42	5.88	6.25
20	2.86	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50

SOURCE: Fred Best, "Individual and Firm Work Time Decisions: Comment," *Work Time and Employment,* Special Report No. 28, National Commission for Employment Policy, Washington, DC, October 1978, p. 225.

a. Nonwage compensation defined as including life and health insurance, private pensions, social security, paid time off, miscellaneous fringe benefits, and unemployment insurance taxes, (*1977 Handbook of Labor Statistics,* p. 217).

b. Can be viewed to include all nonwage compensation (fringe benefits) as well as costs of supervisional coordination, record keeping, recruitment, hiring, training, and retraining.

added recordkeeping and supervision. More important, worktime reductions resulting in increased personnel could result in a less than optimal balance between labor and capital. For example, there would be a likely decline in productive return on "setup" and "shutdown" time for many lines of work, and existing machinery might be overused by more employees at a given point in time. In some cases, productivity might increase due to reduced worker fatigue, but most data on this issue suggest that such gains would be minor or nonexistent.[8] Another source of productivity gains that might result from worktime reductions is the increase of "shift work." Worktime reductions may encourage employers to increase the number of shifts, thus maximizing the return on overall fixed capital.[9]

Views vary as to whether work sharing would affect firm efficiency by increasing or decreasing organizational flexibility. On one side, it has been suggested that work sharing policies would impede firm discretion to make necessary layoffs and hire workers with needed skills.[10] On the other side, it has been suggested that work sharing would allow firms to retain trained workers and reduce hiring and recall costs during expansionary periods.[11] In overview, no comprehensive statement can be made about increased or decreased firm efficiencies resulting from worktime reductions to spread employment. Work organizations vary tremendously. Some have capacity to make a wide range of worktime adjustments without undue costs, many are likely to be able to make a limited number of adjustments within a limited range of technical and institutional constraints, and some have virtually no flexibility for worktime reductions without confronting prohibitive costs.[12]

It is particularly noteworthy that recent empirical studies of firm production functions indicate that most organizations evidence constant production costs per unit of output over a reasonably wide range of output levels. This suggests

that most firms have the capacity to significantly adjust their capital-labor ratios without serious loss of productivity.[13]

Underutilization of Labor

It has been suggested that organizations seeking to optimize their resources tend to hire the most productive workers in the labor force, and that work sharing may force firms to limit the worktime of their best employees and hire those who are less productive.[14] The presumed effect would be a reduction of average worker productivity with resulting sub-optimization of economic growth or increased prices.[15]

It has also been suggested that a number of conditions could counterbalance such underutilization of labor resulting from work sharing. First, trends evolving over the last decade indicate that the educational attainment of the U.S. labor force is surpassing the skill requirements of available jobs, thus providing a surplus of well-trained workers capable of efficiently replacing the worktime foregone by those who are currently employed.[16] Second, provisional conclusions of a recent review of studies indicate that even the "hardcore unemployed" are not significantly less productive than persons currently holding jobs.[17] Third, studies of social mobility and human capital development suggest that the presumed higher productivity of those currently employed is in large measure the result of "accumulative advantage" gained by work experience.[18] This raises the question of whether underutilization of labor resulting from work sharing may be a short term cost which may ultimately result in more productive use of dormant labor reserves. Finally, it has been noted that there are costs to firms and society-at-large for the nonutilization of unemployed workers. Firm payroll and profit taxes support welfare and transfer payments, as well as social programs resulting in part from unemployment,[19] and such expenditures could have inflationary impacts by increasing firm expenses and government expenditures.

Higher Wage Costs Resulting from Increased Demand for Labor

Some have suggested that work sharing could reduce the pool of available labor, increase demand for workers among employers, and cause a bidding up of pay levels which would increase the costs of production and foster inflation.[20] More specifically, it has been noted that the application of worktime reductions to economic sectors with a shortage of certain skilled labor will greatly enhance the labor market value and collective bargaining power of workers with scarce skills, thus leading to undue increases of wages and salaries among such groups.[21] Assuming market responsiveness to reduced labor supply, it is reasonable to assume that inflationary pay increases would result in some fashion from work sharing. However, this effect may be attenuated by the likelihood that many workers hired because of worktime reduction would be new labor force entrants or re-entrants receiving junior level incomes and benefits.

Reduced Capital Investment

Finally, it has been noted that any increases of production costs resulting from work sharing which are not passed on to consumers in the form of price increases or government taxation might reduce firm profit margins and lead to a decline in capital maintenance and investment. The ultimate impact is hypothesized to attenuate long term increases of productivity.[22] In some cases, reduced worktime may stifle investment. However, this effect is likely to vary greatly. For example, in France, where work sharing is receiving serious discussion, a 1979 survey of 526 French business executives found that 43 percent thought worktime reductions would have no impact on investment, 23 percent thought it would increase investment, 32 percent felt it would result in some form of more intense capital utilization (more overtime, added shifts, etc.), and 2 percent expected overuse of existing equipment.[23]

To sum up the production and price stability effects, most theoretical assessments indicate that worktime reductions resulting in a significant creation or preservation of jobs are likely to result in higher production costs. Such costs are expected to reduce profits and investment, decrease overall firm production, or increase prices. As a result, the direct effects of work sharing are hypothesized to reduce productivity and foster inflation. However, these negative impacts on productivity and prices would vary tremendously among specific work sharing approaches. Further, the impacts of work sharing on productivity and prices must be evaluated relative to alternative employment policies and with consideration of secondary social effects.[24] Other employment policies (demand management, public job creation, training programs and wage subsidies) also have costs which likewise would vary according to specific approach. Similarly, acceptance of high unemployment entails costs from welfare, unemployment insurance, foregone productivity, undeveloped human capital and social degeneration. Ultimately, the costs of specific work sharing policies must be assessed relative to alternative measures in accord with their expected job creating and secondary impacts.

JOB CREATION AND IMPACT ON UNEMPLOYMENT

It is frequently noted that worktime reductions may not create new jobs or preserve existing employees.[25] This reservation directly questions the viability of work sharing as an employment policy. Considerable attention must be focused on the questions of what portion of reduced worktime can be expected to create or preserve jobs, and what impact would jobs created as a result of worktime reductions have on the unemployment rate? While these questions must ultimately be resolved by evaluating specific policies, some general isolation of issues is pertinent.

Substitution of Labor by Organizational Efficiency

One possible organizational response to worktime reductions would be to increase efficiency so as not to require added employees. This would likely be accomplished in two ways. First, the organization of labor might be streamlined so as to require greater effort from workers,[26] jobs and the interrelations of workers might be rationalized through operations management techniques, or unnecessary or nonproductive workers might be terminated.[27] Second, firm efficiency and productivity might be increased by substitution of capital for labor.[28] This, of course, may occur independent of work sharing as a result of ongoing investment and technical advancements.[29] Certainly, the effort to substitute labor with increased organizational efficiency is likely to be further stimulated by any increase in labor costs resulting from worktime reductions.[30] Some organizations and industrial sectors will find it reasonably inexpensive to replace lost worktime with new employees, while others may find it highly costly and unattractive.[31] In some cases, increased production costs and diminished financial reserves might limit investment in labor-saving capital. In most cases, it is highly likely that any stimulation of capital investment fostered by work sharing would occur over a long term period.[32]

Reduced Labor Demand

It has been suggested that job creation and preservation as a result of work sharing may be limited due to diminished demand for goods and services caused by price increases made necessary by labor cost increases resulting from worktime reductions. Put differently, increases in the cost of labor as a result of reduced worktime may cause firms to increase the prices of their goods and services, possibly resulting in reduced market demand and ultimately a declining need for

workers.[33] The existence and strength of this potential effect would, of course, depend on the amount of labor cost increase caused by specific work sharing approaches, the degree to which these costs are passed on to consumers, and whether consumer demand for specific goods and services varies significantly with changes in price.

Skill Shortage Barriers to New Employment

In some cases, structural barriers stemming from specific skill shortages would limit the number of new workers hired as a result of worktime reductions. If needed skills are not available among those seeking employment, it may be impossible for employers to hire new workers even if labor shortages are brought about by work sharing.[34] The existence and severity of such problems with transferring the worktime of employed persons to those who are unemployed would, in some measure, depend upon the nature of specific work sharing policies and the flexibility with which they are implemented. Sudden and compelling worktime reductions are more likely to result in "hiring bottlenecks" than those which are put into effect gradually and with flexibility. Further, the current surplus of highly trained workers in the United States suggests that difficulties with recruiting workers who are appropriately skilled or could be easily trained are likely to be rare and short run.

Increased Costs of Job Creation

Just as fixed labor costs and other factors would cause some firms to confront increased expenditures for employees on reduced worktime, these same factors may increase the cost of creating new jobs at less than full time. As a result, the creation of new jobs as a result of shortened worktime may be impeded.[35] Of course, the degree of attenuated job creation resulting from this source would depend upon the

severity of extra costs incurred by particular work organizations.

Windfall Job Creation

In the case of work sharing policies providing subsidies to employers or employees for worktime reductions, there is a possibility that such benefits could be received by organizations and individuals who would have reduced worktime and spread employment regardless of such incentives.[36] This possibility presents some troubling problems concerning the job creation and preserving capacities of many work sharing approaches, as well as other leading employment policies.[37]

Increased Overtime, Moonlighting and Subterranean Work

It has frequently been suggested that worktime reductions would increase overtime, second job holding, and illegal subterranean employment; and that this would attenuate or nullify any reduction of unemployment within the economy as a whole.[38] While such effects may occur to some degree, the extent to which they would impede the job creating potential of work sharing needs to be carefully assessed. Of these effects, increased overtime presents the greatest threat to the viability of work sharing. If worktime reductions increase the fixed costs of labor, it can be expected that many employers would be motivated to increase overtime rather than hire new workers.[39] However, if public policies subsidize increased fixed labor costs or instigate more severe restrictions on overtime (as some work sharing proposals would) the tendency for employers to increase overtime would be muted. Presumably, restricted use of overtime by employers could force employees seeking to earn more income to turn to second jobs of some type. However, if worktime reductions do not entail pay decreases, or if such work reductions are voluntarily chosen despite pay

decreases, the extent of increased second job holding would not likely be significant.

In the United States, a reasonably constant 6 percent of all workers hold two or more jobs, and the vast majority of second jobs pay significantly less than the primary job.[40] Thus, relatively few workers experiencing worktime reductions with no pay loss or voluntary pay loss would be expected to seek second jobs. If worktime reductions are compulsory and entail pay loss, it would be likely that second job holding would rise. The extent to which this would nullify the job creating potential of work sharing is subject to speculation. Increases in subterranean work due to worktime reductions would, in large measure, be determined by the conditions mentioned above. In the case of work sharing policies which make new hiring increasingly costly or seek to exclude workers from labor force participation, it might be expected that the incidence of subterranean work would grow.

Stimulation of Labor Force Growth

A major reservation expressed about work sharing is that the jobs created would encourage more persons to enter the labor force, and therefore the unemployment rate would not be reduced.[41] Further, it has been suggested that the less than full-time work opportunities would stimulate increased labor participation among women, older workers, students and the handicapped. In particular, the increase of part-time employment opportunities, which accounts for the employment of large portions of women workers, is likely to further accelerate the already rapid growth of female labor force participation. At the same time, it has been suggested that increased opportunities for part-time and other less than full-time employment would remove barriers which now prevent many unemployed job seekers from finding suitable employment.[42]

Although the impact of increased job creation through worktime reductions on labor force growth and unemployment rates is a matter of speculation, available data suggests that this form of job creation would likely have particularly stimulating effects on the number of persons seeking jobs.[43] However, considerable thought needs to be given to the issue of whether this is good or bad. While extra stimulation of labor force growth brought about by work sharing may attenuate desired reductions of the unemployment rate, it is likely that such policies would create more new jobs than new workers.[44] More important, there is a question of whether worktime reductions which meet the needs of today's changing labor force (i.e., more women and older workers) might facilitate long-run adjustments in working conditions that will ultimately be necessary.[45]

In overview, it appears unlikely that work sharing is likely to create or preserve as many job hours as the amount of worktime foregone. Thus, all other things held constant, work sharing would be likely to foster an aggregate decline of total time worked by the labor force.[46] The question which is not answerable at this time concerns what portion of worktime reductions can be expected to lead to jobs for the unemployed, and if any work sharing policies can be expected to yield a reasonable replacement of work reductions with new jobs without undue harm to productivity and prices?

Certainly, the most promising work sharing approaches might be adjusted in a number of ways to yield the maximum possible job creation or preservation. In many cases, the ways in which worktime is reduced may have considerable impact on job creation. For example, it has been suggested that longer vacations would not stimulate new jobs within most industrial sectors.[47] Correspondingly, other forms of worktime reduction might yield substantial transfers of foregone work to the unemployed.[48] In addition to selecting

the most promising form of reducing worktime, supplementary policy adjustments may increase the employment impact of work sharing. As an illustration, it has been estimated that "job release" provisions attached to some early retirement policies in Europe have created four times as many jobs as regular retirement programs which do not require that vacated positions result in new hiring.[49] In similar fashion, some promising work sharing policies might be augmented with requirements that a certain proportion of worktime reductions result in new jobs, subsidies to encourage job creation, and other such devices. While such programmatic elements may limit the acceptability and participation of work sharing policies, they may be necessary to guarantee some minimal job creation return for the costs of worktime reductions.

LEVEL OF PARTICIPATION AND AGGREGATE IMPACT

It has been suggested that work sharing may be an ineffective approach to combating joblessness because firms and workers would not participate in voluntary programs and mandatory policies could not be enforced. Employers might be likely to eschew work sharing because of presumed extra costs, particularly if workers do not accept some pay loss along with reduced work. Managers have also expressed reservations on the basis of administrative complexities, caution about unpredictable developments, and fear of government interference.[50] It has also been claimed that employed workers would not accept worktime reductions if they resulted in loss of pay,[51] and unions have been quick to voice this view as well as express opposition to volunteeristic forms of work sharing because such programs are thought to undermine standardized work conditions and the integrity of the collective bargaining process.[52] Some forms of work sharing, most notably mandatory worktime reductions and

limitations, are thought to be largely unenforceable without the immediate presence of unions, and in areas where organized labor represents a small portion of the work force, such policies may have only limited impact.[53]

At this stage, attempts to assess the level of participation in work sharing and its aggregate impact on employment are highly speculative. There are certainly barriers to widespread application, and it is difficult to determine if it is possible to remove them and how long it would take for employers to readjust to the removal of these barriers.

Response from Employers

Many of the reservations of employers to work sharing have already been discussed in previous pages. Needless to say, the costs and benefits, and therefore the acceptability of work sharing, will vary tremendously from firm to firm. Quite notably, some specific approaches to work sharing may not be particularly costly or otherwise threatening to employers, and extra costs that do exist might be partly absorbed by the government and possibly by workers. In many cases, presumed resistance from the business community may be over-estimated. For example, a recent survey study suggests that the vast majority of French business leaders expect and accept worktime reductions to spread employment opportunities.[54] There are also indications that U.S. employers might be open to certain forms of work sharing.[55]

Response from Workers and Desire for More Free Time

Worktime trends and recent survey studies of employee preferences indicate that a growing portion of the U.S. work force are willing to forego earnings for time away from their jobs.[56] One study of American workers indicates that this interest in reduced worktime may be quite notable. A brief

review of this study will provide insight into the extent and nature of workers to trade income for time.[57]

During August 1978, a nationally representative survey of the American population over age 18 was conducted to assess whether workers were willing to forego earnings for more free time. Among the questions fielded were two series pairing percent reductions of potential and current income against proportionally valuable gains of specific forms of free time. When working respondents were asked if they would forego some portion of a 10 percent pay raise for different forms of free time, 26.8 percent reported willingness to trade some portion of such a pay raise for shorter workdays, 43.5 percent would forego some pay increase for longer weekends, 65.6 percent stated willingness to trade potential pay for extended vacations, a similar 65.3 percent for prolonged leaves with pay every seven years (sabbaticals), and 51.4 percent were interested in taking a lower pay raise to obtain an earlier retirement (see table 2-3).[58]

Interest in exchanging some portion of current income for more free time was also substantial. Specifically, 23 percent were willing to forego 2 percent or more of their current incomes for shorter workdays, 26.2 percent would trade 2 percent or more for longer weekends, 42.2 and 42.1 percent would exchange 2 percent or more for extended vacations or sabbatical leaves, respectively, and some 36 percent would trade the same for earlier retirement (see table 2-4).[59]

Responses to these questions varied somewhat according to social characteristics such as age, sex and income, but the general patterns described above were reasonably constant for all subgroups. The most important variation was the difference of preferences demonstrated for alternative forms of free time. Clearly, the ways in which potential free time is scheduled is an important determinant of whether or not individuals are willing to trade potential or current earnings

Table 2-3
Stated Worker Preferences Toward Exchanging All or Portions of a 10 Percent Pay Raise for Alternative Forms of Free Time (percentage breakdown)

Value of tradeoff	Reduced workday vs. raise	Reduced workweek vs. raise	Added vacation vs. raise	Sabbatical vs. raise	Earlier retirement vs. raise
No part of raise for free time	73.2	56.5	34.4	34.7	48.6
40 percent of raise for free time	6.7	15.4	31.8	34.2	19.3
70 percent of raise for free time	4.9	5.3	4.5	8.1	8.3
100 percent of raise for free time	14.1	22.8	29.4	23.0	23.7
Total percent ..	100.0	100.0	100.0	100.0	100.0
Total respondents .	950	952	954	949	952

SOURCE: Data cited from results of a national random survey conducted in August 1978 (Fred Best, *Exchanging Earnings for Leisure,* Special Research Monograph, Office of Research and Development, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980).

QUESTIONS:

Workday: Which one of the following choices between a pay raise and a shorter workday would you select? (A) 10 percent pay raise and no reduction of the workday; (B) 6 percent pay raise and a 19-minute reduction of each workday; (C) 3 percent pay raise and a 34-minute reduction of each workday; (D) no pay raise and a 48-minute reduction of each workday.

Workweek: Which one of the following choices between a pay raise and a shorter workweek would you select? (A) 10 percent pay raise and no reduction of each workweek; (B) 6 percent pay raise and 1.6-hour reduction of each workweek; (C) 3 percent pay raise and a 2.8-hour reduction of each workweek; (D) no pay raise and a 4-hour reduction of each workweek.

Vacation: Which one of the following choices between a pay raise and a longer paid vacation would you select? (A) 10 percent raise and no added vacation time; (B) 6 percent pay raise and 10 workdays of added vacation; (C) 3 percent pay raise and 17.5 workdays added vacation; (D) no pay raise and 25 workdays added vacation.

Sabbatical: What is your choice between a pay raise and an extended leave with pay from work after six years of work? (A) 10 percent pay raise and no leave time; (B) 6 percent pay raise and 12 workweeks (60 workdays) paid leave; (C) 3 percent pay raise and 21 workweeks (105 workdays) paid leave; (D) no pay raise and 30 workweeks (150 workdays) paid leave.

Earlier Retirement: What is your choice between a pay raise and earlier retirement? (A) 10 percent pay raise and no change in retirement plan; (B) 6 percent pay raise and 10 workdays earlier retirement for each future year of work; (C) 3 percent pay raise and 17.5 workdays earlier retirement for each future year of work; (D) no pay raise and 25 workdays earlier retirement for each future year of work.

Table 2-4
Stated Worker Preferences Toward Exchanging Portions of Current Income for Alternative Forms of Free Time (percentage breakdown)

Value of tradeoff	Shorter workday vs. pay	Reduced workweek vs. pay	Added vacation vs. pay	Sabbatical leave vs. pay	Earlier retirement vs. pay
Nothing for time ...	77.0	73.8	57.8	57.9	64.0
2 percent of pay for time.....	8.7	11.6	23.2	24.4	17.6
5 percent of pay for time.....	5.8	--	8.5	8.0	8.1
10 percent of pay for time.....	--	7.6	6.2	4.8	5.9
12 percent of pay for time.....	5.5	--	--	--	--
15 percent of pay for time.....	--	--	--	4.8	--
20 percent of pay for time.....	--	4.5	2.2	--	4.4
30 percent of pay for time.....	1.6	--	--	--	--
33 percent of pay for time.....	--	--	2.0	--	--
40 percent of pay for time.....	--	.9	--	--	--
50 percent of pay for time.....	1.5	1.6	--	--	--
Total percent ..	100.0	100.0	100.0	100.0	100.0
Total respondents ..	954	953	952	951	951

SOURCE: Data cited from results of a national random survey conducted in August 1978 (Fred Best, *Exchanging Earnings for Leisure,* Special Research Monograph, Office of Research and Development, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980).

NOTE: Column spaces are frequently blank for many tradeoff options because questions dealing with different forms of free time did not always have parallel exchange options.

QUESTIONS:

Workday: What is the largest portion of your current yearly income that you would be willing to give up for shorter workdays? (A) nothing; (B) 2 percent (1/50) of your income for 10 minutes off each workday; (C) 5 percent (1/30) of your income for 25 minutes off each workday; (D) 12 percent (1/8) of your income for 1 hour off each workday; (E) 30 percent of your income for 2 hours off each workday; (F) 50 percent (1/2) of your income for 4 hours off each workday.

Workweek: What is the largest portion of your current yearly income that you would be willing to give up for shorter workweeks? (A) nothing; (B) 2 percent (1/50) of your income for 50 minutes off 1 workday a week; (C) 10 percent (1/10) of your income for 4 hours off 1 workday a week; (D) 20 percent (1/5) of your income for 1 full workday off each week; (E) 40 percent (4/10) of your income for 2 full workdays off each week; (F) 50 percent (1/2) of your income for 2 full workdays off each week.

Vacation: What is the largest portion of your current yearly income that you would be willing to give up for more paid vacation time? (A) nothing; (B) 2 percent (1/50) of your income for 5 workdays added paid vacation each year; (C) 5 percent (1/20) of your income for 12.5 workdays added paid vacation each year; (D) 10 percent (1/10) of your income for 25 workdays added paid vacation each year; (E) 20 percent (1/5) of your income for 50 workdays added paid vacation each year; (F) 33 percent (1/3) of your income for 87.5 workdays (17.5 workweeks) added paid vacation each year.

Sabbatical: What is the largest portion of your current yearly income that you would be willing to give up in exchange for an extended leave without pay every seventh year? (A) nothing; (B) 2 percent (1/50) of your yearly income for 7 workweeks' paid leave after six years of work; (C) 5 percent (1/30) of your income for 17.5 workweeks' paid leave after six years of work; (D) 10 percent (1/10) of your income for 35 workweeks' paid leave after six years of work; (E) 15 percent (1/20) of your income for 52 workweeks' (1 workyear) paid leave after six years of work.

Earlier Retirement: What is the largest portion of your current yearly income that you would be willing to give up in exchange for earlier retirement? (A) nothing; (B) 2 percent (1/50) of your income for earlier retirement at a rate of 5 workdays for every year worked until retirement; (C) 5 percent (1/20) of your income for earlier retirement at a rate of 12.5 workdays for every year worked until retirement; (D) 10 percent (1/10) of your income for earlier retirement at a rate of 25 workdays for every year worked until retirement; (E) 20 percent (1/5) of your income for earlier retirement at a rate of 50 workdays for every year worked until retirement.

for time. Specifically, extended time away from work, most notably vacations and sabbatical leaves, evoked the greatest desire to make time-income trade-offs.

The possibility that many workers might desire to simultaneously exchange some portion of their earnings for two or more types of free time, coupled with the likelihood that the maximum trade-off that individuals are willing to make will vary according to personal preferences for specific types of free time, suggests that simple summaries of responses for each question may underestimate interest in exchanging income for time. To date, neither data nor analytical techniques have been developed to assess the first source of possible underestimation. However, a composite summary of responses from each series of trade-off questions made it possible to compute the maximum exchange that each individual respondent was willing to make for any of the five alternative forms of free time. For example, if an individual was willing to forego 20 percent of current income for shorter workdays but only 5 percent for other forms of time, he or she would be reported as being willing to make a maximum trade-off of 20 percent. The totaling of all such computations for each survey respondent reveals that a full 84.4 percent of working respondents were willing to exchange some portion of a 10 percent raise for one of the five free time options; and that the average respondent stated a willingness to trade some 65.6 percent of this raise for some form of free time. Correspondingly, 59.3 percent of the working respondents expressed desire to forego two percent or more of their current earnings for some form of reduced worktime, with the average respondent willing to trade 4.7 percent of his or her income for one of the five forms of free time.[60]

One might question whether workers would freely make the exchanges reported above if "real life" options were provided. Realistically, actual trade-offs might be smaller than

stated preferences. However, variance between stated and actual trade-offs may not be as great as some might think. In one case, which will be discussed later in this volume, some 17 percent of 10,000 county employees actually gave up between 5 and 20 percent of their annual incomes for added vacation time.[61] Presumably, if the types of free time available were expanded to include other alternatives, and the threshold for income forfeiture was reduced to 2 percent (as in the case of most of the questions used in the above-noted survey), the proportion of employees choosing to forego earnings for time would likely increase notably.

Response from Organized Labor

Despite indications that large portions of the United States labor force may prefer to exchange some of their earnings for more free time, union initiatives in this area have been restricted to proposals for mandatory workweek reductions without pay loss and limited collective bargaining efforts for varied forms of free time.[62] American unions have so far evidenced only limited interest in the areas of increasing individual worktime choices[63] or willingness to discuss the prospect of actually foregoing pay for leisure.[64] As noted earlier, the lack of interest in these areas stems in part from concern with maintaining a manageable standardization of work conditions and consolidated bargaining influence.[65] In many cases, steadfast union commitment to worktime reduction without pay loss may be a reasonable bargaining posture which may become open to negotiation at some future date. Additionally, some union officials have voiced the viewpoint that shorter workweeks are the type of worktime reductions which will yield the greatest creation of jobs.[66] In any case, unions at this time appear to be avidly in favor of only a limited number of work sharing approaches. Whether or not this position will change is unclear at this time.

Speculation on Aggregate Employment Impact

Given the imponderables concerning the extent to which worktime might be reduced and the transferability of foregone job time to those who are unemployed, it is only possible to estimate a range of participation in work sharing programs and the resulting aggregate impact on employment. Table 2-5 isolates a range of possible impacts for a fictitious labor force of 100 million persons (approximately the size of the U.S. work force in 1977) employed an average of 2,000 hours a year (40 hours a week with two weeks vacation). Simple computations show that a very small average .5 percent reduction of worktime would yield a maximum of 1,000 billion work hours or 500,000 full-time jobs. Presumably, the hours of work and number of jobs created for the unemployed would be less than the amount of worktime reduction. At the other end of the spectrum, optimistic computations show that an average worktime reduction of 10 percent would decrease aggregate worktime by 20,000 billion hours each year to produce a maximum of 10 million new full-time jobs. A moderate speculation of potential participation and impact would be that average yearly worktime might realistically be reduced by from 2 to 5 percent and, on the cautious assumption that 50 percent of foregone worktime could be transferred to the unemployed, between 1 and 2.5 million new full-time jobs might be created. These speculations suggest that reasonably successful work sharing policies would be unlikely to solve the problem of high unemployment, but that such policies may have potential as a significant supplementary strategy for reducing the intensity and inequities of widespread joblessness.[67]

ble 2-5

strative Computations of Hours of New Employment and Number of Full-Time Jobs* Created by Varied Average els of Aggregate Worktime Reductions Under Different Replacement Rate Assumptions (Calculations based on a itious population of 100 million persons working an average of 2000 hours a year)

oportion of worktime ansferred new jobs acement rate)	.5 percent average reduction of worktime		1 percent average reduction of worktime		2 percent average reduction of worktime		5 percent average reduction of worktime		10 percent average reduction of worktime	
	Aggregate hours released to new jobs (000,000s)	Total full-time jobs created	Aggregate hours transferred to new jobs (000,000s)	Total full-time jobs created	Aggregate hours transferred to new jobs (000,000s)	Total full-time jobs created	Aggregate hours transferred to new jobs (000,000s)	Total full-time jobs created	Aggregate hours transferred to new jobs (000,000s)	Total full-time jobs created
rcent acement rate	1,000	500,000	2,000	1,000,000	4,000	2,000,000	10,000	5,000,000	20,000	10,000,000
cent acement rate	750	375,000	1,500	750,000	3,000	1,500,000	7,500	3,750,000	15,000	7,500,000
cent acement rate	500	250,000	1,000	500,000	2,000	1,000,000	5,000	2,500,000	10,000	5,000,000
cent acement rate	250	125,000	500	250,000	1,000	500,000	2,500	1,250,000	5,000	2,500,000

ll-time job is defined as employment for 2000 hours a year.

SOCIAL EQUITY AND TARGETABILITY

It has been occasionally observed that even if worktime reductions spread employment among a larger number of persons, the result would be to concentrate costs on those least able to bear the burden while doing little to relieve joblessness among the "hardcore unemployed."

Inequitable Distribution of Costs

In the broadest sense, work sharing policies in which some of the costs are passed on to all workers would certainly impose the greatest hardships on those with the lowest earnings.[68] If earnings were to decline in roughly the same proportion to worktime, there can be little doubt that many less well-to-do workers would be pushed to the financial breaking point. Put differently, it is likely that earnings lost among nonaffluent workers have more serious impacts than proportionally equal income losses among the affluent.[69] In the final analysis, any inequitable distribution of the costs of work sharing will be largely determined by specific policies. Universal and mandatory policies will likely aggravate inequities while targeted and volunteeristic approaches could minimize such effects. Of course, thought must be given to the financial duress experienced by many of those who are totally without jobs and whether it is better to have workers with jobs share some of this burden so that the trauma of total unemployment can be reduced.

Additionally, it has been suggested that an across-the-board reduction of worktime to spread employment would increase the demand for highly skilled workers who are already well paid. As a result, earnings among groups of workers with scarce skills would rise and the range of income inequality between highly trained and poorly trained workers could be expected to increase.[70] Conversely, it has also been suggested that labor shortages within highly paid occupa-

tions would encourage employers to recruit and train workers for such positions.[71] Presumably, the upward occupational mobility resulting from such recruitment would increase the incomes of many skilled but underutilized workers, thus attenuating or nullifying medium- and long-range income inequities resulting from most work sharing schemes.

Inequitable Distribution of Jobs

A number of conditions have been cited that may cause jobs created by work sharing to be disproportionately distributed to job seekers with less urgent unemployment problems. First, it has been suggested that jobs created by work sharing would be snatched up by relatively well-trained but marginal job seekers such as women re-entering the labor force. If this proved to be true, work sharing would contribute little to the pressing problems of less competitive "hardcore" unemployed persons. At the same time, it must be noted that worktime reductions in the more attractive and better paid occupations are likely to have a "trickle up" effect in which adequately skilled but less competitive workers are drawn into better positions with a resulting reduction of competition for entry level positions for less competitive job seekers.

Second, it has been noted that unemployment is disproportionately high among groups working in the lower skilled occupations, and that work sharing would have to be restricted to these occupations because such persons presumably would not be suitably trained for higher skilled jobs.[72] If this is true, redistribution of employment by work sharing would reduce worktime available to individuals within certain blue-collar and service occupations while having little effect on the hours and earnings available to more highly skilled workers. However, as previously noted, education and skill attainment is significantly underutilized, and

the availability of surplus abilities can be expected to nullify such restrictions on work sharing. Further, the existence and severity of such effects would vary notably according to the specific work sharing approaches applied. For example, volunteeristic approaches encouraging individuals to exchange earnings for desired free time would presumably engender the greatest participation among highly skilled and trained workers, thus reducing worktime among those best able to afford pay losses, and providing upward occupational mobility to workers with underutilized skills and eventually opening jobs for those in lower skilled occupations.

Third, worktime reductions among workers who are more competitive in the labor market could cause such persons to seek second jobs to recoup pay losses. Since second jobs are generally held in occupations requiring less skill and providing lower pay than primary jobs, increased second job holding could displace workers in lower skilled occupations.[73] The extent to which lower skilled workers would be displaced by higher skilled persons seeking to regain earnings lost due to work sharing is highly speculative. As noted earlier, the proportion of the work force holding second jobs is generally low.[74] Further, since highly skilled and paid workers would be best able to sustain pay reductions, it cannot be expected that displacement of lower skilled workers as a result of work sharing would be appreciable. Certainly, the extent of such displacement would vary according to work sharing approach. Mandatory work sharing could be expected to maximize this effect while volunteeristic approaches encouraging individual exchanges of earnings for free time would minimize displacement due to second job holding because worktime reductions would largely reflect individual time-income trade-off preferences.

In overview, there may be some inequitable distribution of jobs and income resulting from work sharing, but such inequities are not likely to be large and would vary notably in

accord with specific work sharing policies. In many cases, the extent of inequitable distribution of costs and jobs might be reduced by policy provisions which target the application of work sharing and subsidies for attenuating the costs of worktime reductions.

FLEXIBILITY FOR IMPLEMENTATION AND TERMINATION

A major reservation expressed about work sharing has been that worktime reductions may become inflexible and nonreversible.[75] This would likely hamper organizational capacities to adjust to changing economic and technical circumstances.[76] As already noted, fears have been expressed that sudden and inflexible sharing of work could result in "skill bottlenecks" in which worktime reductions among employees with scarce skills might foster critical labor shortages and accompanying economic slowdowns.[77] Others have warned that nonreversible worktime reductions which may be suitable to the labor surplus of the immediate future may complicate long term labor shortages projected for the late 20th and early 21st centuries as a result of demographic trends.[78] Further still, there has been concern that certain approaches to work sharing may unduly constrain individual freedom to adjust worktime upward or downward to meet personal needs.[79]

Concerns over flexibility and reversibility should be given considerable attention in the evaluation of prospective work sharing policies. As has been the case with all the issues mentioned in this section, different work sharing approaches offer considerable variation of flexibility and reversibility.[80] Indeed, some approaches even enhance current capacities for adjusting worktime. Whenever possible, it would seem that both short and long tem impacts would be enhanced by the design and selection of policies which provide the maximum flexibility for both implementation and termination.

ADMINISTRATIVE EFFICIENCY AND REGULATION

As suggested earlier, a critical determinant in assessing the viability of proposals for work sharing is whether a significant portion of foregone worktime would be transformed into new jobs, which would in many cases depend on the effectiveness of regulatory provisions to insure such transformations. While effective administration and regulation might guarantee that induced worktime reductions produce high job yields, it should be noted that there are costs to effective administration and that participation and compliance would probably decline with the extent and complexity of such provisions. As such, some balance must be found between insuring participation and job creation while avoiding undue administrative problems and costs.

SECONDARY SOCIAL IMPACTS

Many work sharing policies are likely to have important secondary impacts which would enhance the general quality of life.[51] For example, work sharing might provide workers with desired free time;[52] this in turn might be used to improve family well-being,[53] increase options for education and retraining,[54] and open many opportunities for self-enriching leisure. Similarly, worktime reductions brought about by work sharing would have the potential to ease the transition to retirement.[55] Finally, work sharing could attenuate the problems resulting from the social degeneration and the economic costs of government programs which accompany unemployment.[56]

FOCUSING ON THE SPECIFICS

Existing discussions have postulated many benefits and costs to a wide range of distinct work sharing approaches.

Realistically, every approach to sharing employment is likely to foster some degree of the positive and negative impacts observed in this section. The critical questions yet to be addressed concern which approaches to sharing work minimize the costs and maximize the benefits, and whether the job creation and social benefits which can be expected from the more promising work sharing policies outweigh prospective costs and problems.

NOTES

1. Among other rationales, work sharing has been proposed in the form of sabbaticals in order to expand adult education, as part-time employment in order to ease family and child care problems, as "job splitting" in order to facilitate phased retirement, and as longer vacations by those primarily concerned with gaining more leisure time.

2. Albert S. Glickman and Zenia H. Brown, *Changing Schedules of Work*, W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, 1974.

3. Jeffrey Perloff and Michael Wachter, "Work Sharing, Unemployment and the Rate of Economic Growth" in *Work Time and Employment*, Special Report No. 28, National Commission for Employment Policy, Washington, DC, October 1978, pp. 87-89; and Christian Tyler, "Unions' Crusade for the Shorter Working Week," *Financial Times*, June 2, 1978, editorial page.

4. For U.S. data on such fringe benefit costs, see Joyce Nussbaum and Donald Wise, "The Overtime Pay Premium and Employment," *Work Time and Employment*, p. 318; and *1977 Handbook of Labor Statistics*, Washington, DC, U.S. Department of Labor, p. 237. For data from other nations, see R.A. Hart and P.J. Sloane, "Working Hours and the Distribution of Work," paper prepared under contract from the OECD for the Conference on Collective Bargaining ald Government Policies, Washington, DC, July, 1978, p. 13.

5. *1977 Handbook*, p. 237.

6. Fred Best, "Comment on Individual and Firm Worktime Decisions," *Work Time and Employment*, p. 225.

7. For further discussion of fixed labor costs as a barrier to worktime reductions and work sharing, see Robert Clark, *Adjusting Hours to Increase Jobs,* Special Report No. 15, National Commission for Employment Policy, Washington, DC, September 1977, pp. 30-42; Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth,"p. 7; Joseph Garbarino, "Fringe Benefits and Overtime as Barriers to Expanding Employment," *Industrial and Labor Relations Review,* April 1964, pp. 426-444; and Sherwin Rosen, "The Supply of Work Schedules and Employment," *Work Time and Employment,* pp. 151-152.

8. Hart and Sloane, "Working Hours," p. 26; John Owen, *The Price of Leisure,* Rotterdam University Press, Holland, 1976, pp. 20-23; and David Brown, "Hours and Output," in Clyde Dankert et al. (Eds.), *Hours of Work,* Harper and Row, New York, 1965, pp. 147-160.

9. "Objectives and Effects of Work Sharing," Working Document, Directorate-General, Employment and Social Affairs, Commission of European Communities, Brussels, November 24, 1977, p. 10; and Tyler, "Unions' Crusade."

10. Hart and Sloane, "Working Hours," pp. 20-21.

11. Stephen Wandner and Gary Reed, "Developmental Issues of a U.S. Short-Time Compensation Program" in *Shared Work Compensation,* Special Research Monograph, Office of Research, Legislation and Program Policies, Unemployment Insurance Service, U.S. Department of Labor, Washington, DC, 1980.

12. For a general discussion of organizational constraints and options, see Rosen, "Supply of Work Schedules"; Jay Galbraith, *Designing Complex Organizations,* Addison-Wesley, Reading, MA, 1973; James Thompson, *Organizations in Action,* McGraw-Hill, New York, 1967; and Curt Tausky, *Work Organizations,* Peacock, Itasca, IL, 1970, pp. 76-117.

13. A. Koutsoyiannis, *Modern Microeconomics,* St. Martin's Press, New York, 1979, pp. 114-150 and 256-282.

14. Clark, *Adjusting Hours,* p. 5; and Melvin Reder, "Hours of Work and the General Welfare" in Dankert et al., *Hours of Work,* pp. 179-200.

15. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 87-122.

16. Fred Best, *Flexible Life Scheduling: Breaking the Education-Work-Retirement Lockstep,* Praeger, New York, 1980, Ch. 4; and Orlando Rodriguez, "Occupational Shifts and Educational Upgrading in the

American Labor Force Between 1950 and 1970," *Sociology of Education,* January 1978, pp. 55-67.

17. A preliminary review of evaluations of productivity conducted by Ivar Berg indicates that recently hired persons previously defined as "hardcore unemployed" are not less productive than previously employed co-workers. Such findings may be an expose of a long standing social myth concerning the unemployed, or reflect social changes such as increased skill levels of the unemployed and possible decline of senior worker motivation and performance due to increased job security, skill obsolesence and aging. Further assessment is merited concerning these issues.

18. For a discussion of economic theories concerning "human capital" see Jacob Mincer, "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy,* August 1958, pp. 281-302; Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education,* Columbia University Press, New York, 1964; and Theodore Schultz, "Reflections on Investment in Man," *Journal of Political Economy,* October 1962, pp. 1-8. For studies of the cause of social mobility and occupational achievement see Christopher Jencks et al., *Inequality: A Reassessment of the Effects of Family and Schooling in America,* Harper Colophon Books, New York, 1972; Robert M. Hausner, *Socio-Economic Background and Educational Performance,* American Sociological Association Monograph, Washington, DC, 1971; and Raymond Boudon, *Education, Opportunity and Social Inequality,* Wiley, New York, 1973.

19. Private and public expenditures to support the unemployed and attenuate the problems resulting from unemployment (Harvey Brenner, *The Social Costs of Unemployment,* Joint Economic Committee, U.S. Congress, 1976) are both large and inflationary because they yield little or no productive return.

20. Paul Samuelson, *Economics,* 8th Edition, McGraw-Hill, New York, 1970, pp. 552-553.

21. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 88-91; and Alastair Evans, "Measures to Make Jobs Go Round," *Personnel Management,* January 1979, p. 33.

22. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 87-122.

23. "Les Industriels: Qui Mais . . . a' la Reduction du Temps de Travail," *L'Usine Nouvelle,* February 22, 1979, p. 105.

24. James R. Mills, "Leisure Sharing: Its Time Has Come," *State Government,* Spring 1979, pp. 75-76.

25. Evans, "Make Jobs Go Round," pp. 33-35; and Hart and Sloane, "Working Hours," pp. 13-14.

26. John Zalusky, "Comment on Overtime Pay Premium and Employment," *Work Time and Employment.*

27. Daniel Hamermesh, "Unemployment Insurance, Short-Time Compensation and the Workweek," *Work Time and Employment.*

28. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," p. 24; and Evans, "Make Jobs Go Round," pp. 33-35.

29. Howard Bowen and Garth Mangum (Eds.), *Automation and Economic Progress,* Prentice-Hall, Englewood Cliffs, NJ, 1966.

30. Nussbaum and Wise, "Overtime Pay"; and Ronald G. Ehrenberg, *Fringe Benefits and Overtime Behavior,* Heath, Lexington, MA, 1971.

31. A survey of 526 French business executives found that 51 percent stated that worktime reduction of 2 percent would not lead to the hiring of new employees. Some 17 percent felt new hiring would be necessary, 14 percent would increase overtime, and 14 percent would hire temporary employees to cover labor shortages ("Les Industriels," p. 105). Another survey of German employers conducted in 1977 by the Institute for Economic Forecasts in Munich found that 46 percent of respondents thought worktime reductions would lead to increased employment. (Courtesy of Jean-Pierre Pellegrin, OECD, Paris).

32. Nussbaum and Wise, "Overtime Pay," pp. 317-338.

33. Robert Taylor, "Work Sharing and Worklessness," *New Society,* November 23, 1978, p. 453.

34. "Objectives and Effects," p. 9; and Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 90-92.

35. Hart and Sloane, "Working Hours," p. 11.

36. Ibid., pp. 4-10, 13-14; Hamermesh, "Unemployment Insurance, pp. 249-254; and Robert Eisner, "Employment Taxes and Subsidies," *Work Time and Employment* pp. 275-310.

37. *CETA: An Analysis of the Issues,* Special Report No. 23, National Commission for Employment Policy, Washington, DC, May 1978, pp. 3-29; and *Job Creation Through Public Service Employment: Summary of Findings and Recommendations,* Vol. 1, An Interim Report, National Commission for Employment Policy, Washington, DC, March 1978, pp. 19-26.

38. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 82-84; and Hart and Sloane, "Working Hours," p. 23.

39. Hart and Sloane, "Working Hours," pp. 4-18; Garbarino, "Fringe Benefits"; Ehrenberg, *Fringe Benefits and Overtime;* Clark, *Adjusting Hours,* pp. 26-28 and 53-55; Robert M. McDonald, "The Fringe Barrier Hypothesis and Overtime Behavior," *Industrial and Labor Relations Review,* July 1966, pp. 562-569; "A Model of the Factors Influencing Hours of Work of Manual Workers," *Hours of Work, Overtime and Shift Working,* Supplement to Report No. 161, National Board for Prices and Incomes, Her Majesty's Stationery Office, London, December 1970, pp. 56-65; "Les Industriels," p. 105.

40. Kopp Michelotti, "Multiple Job Holding Rate Remained Unchanged in 1976," *Monthly Labor Review,* June 1977, pp. 44-48; and Fred Best, Phillip Bosserman and Barry Stern, "Income-Time Trade-off Preferences of U.S. Workers: A Review of Literature and Indicators," *Leisure Sciences,* Fall 1979, pp. 119-141.

41. For example, American labor economist Eli Ginzberg estimated that in 1977 there were some 17 million persons not then in the labor force that would seek employment if jobs became available (Eli Ginzberg, "The Job Problem," *Scientific American,* November 1977, pp. 43-51). Presumably, all OECD nations have a reserve of "hidden unemployment" which would emerge with increased job opportunities.

42. *Jobs for the Hard-to-Employ: New Directions for Public-Private Partnership,* Committee for Economic Development, Washington, DC, January 1978, pp. 73-75. It should be noted that analysis of exploratory survey research concerning the unemployed and persons thinking about seeking a job indicates that worktime is only a minor employment barrier (Fred Best, *Exchanging Earnings for Leisure: Findings of a National Survey on Worktime Preferences,* Special Research Monograph No. 79, Office of Research and Development, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980, pp. 118-127).

43. Best, *Exchanging Earnings,* pp. 116-124. It should be noted that the high labor force participation rate in Sweden has been stimulated by the availability of part-time employment. Specifically, as much as 88 percent of the increase in women workers between 1965 and 1970 was the result of expansion in part-time employment (Christina Jonung, "Sexual Equality in the Swedish Labour Market," *Monthly Labor Review,* October 1978, p. 31). Similarly, available data from the U.S. indicate that

large portions of potential women workers prefer part-time jobs (William Deuterman and Scott Brown, "Voluntary Part-Time Workers: A Growing Part of the Labor Force," *Monthly Labor Review,* June 1978, pp. 3-10).

44. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 89-91.

45. If trends toward increased employment of women continue, the growth of the labor force will not only stimulate increased pressures for redistribution of work between the sexes, both within family units and society-at-large, but foster child care problems requiring downward adjustment of worktime for both sexes. Signs of such pressures are already occurring in Sweden (Jonung, "Sexual Equality," pp. 33-34) and the United States (Denise Polit, "The Implications of Non-Traditional Work Schedules for Women," *The Urban and Social Change Review,* Vol. 11, 1978, pp. 37-42).

46. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 96-98.

47. "Objectives and Effects," p. 24. It should be noted that while longer vacations may not create jobs, in many situations the extension of vacation time in 24-hour-a-day, year-round operations would definitely create organizational needs for added labor.

48. It has been suggested that extended "sabbatical leaves" would induce a high job creation rate (Jule Sugarman, "The Decennial Sabbatical," *CUPA Journal,* Summer 1977, Vol. 28, No. 3, pp. 47-52). Similarly, the 1976 United Auto Workers contract for added paid days off in the U.S. promises to produce high job yields because days off are scheduled in rotational fashion Monday through Friday so that ongoing organizational operations require day-to-day maintenance of steady labor supply ("Paid Personal Holidays," *Solidarity,* October 21, 1977, pp. 6-10).

49. Hart and Sloane, "Working Hours," pp. 30-32.

50. Fred Best, Gary Lefkowitz, Maureen McCarthy, Gail Rosenberg and Barry Stern, "Acceptability of Short-Time Compensation in the United States: Summary of Interviews with Workers, Employers and Government," *Shared Work Compensation,* Special Research Monograph, Office of Research, Legislation and Program Policies, Unemployment Insurance Service, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980; and "Objectives and Effects," pp. 11 and 14.

51. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 96-98; and Taylor, op. cit., pp. 453-454.

52. Zalusky, "Comment," pp. 339-342.

53. Nussbaum and Wise, "Overtime Pay," pp. 317-338.

54. "Les Industriels," pp. 102-108.

55. Best, Lefkowitz, McCarthy, Rosenberg and Stern, "Acceptability of Short-Time Compensation"; and "Testimony of Robert Monogan, President, California Manufacturers Association," *Leisure Sharing,* Hearings of the Select Committee on Investment Priorities and Objectives, California State Senate, Sacramento, November 1, 1977.

56. Best, Bosserman and Stern, "Income-Time Trade-Off," pp. 119-141; and "Hours of Work in Other Countries," *Hours of Work, Overtime and Shift Working,* pp. 92-116; Fred Best, "Preferences on Worklife Scheduling and Work-Leisure Tradeoffs," *Monthly Labor Review,* June 1978, pp. 31-37.

57. Best, *Exchanging Earnings,* pp. 59-103.

58. Ibid., pp. 70-79.

59. Ibid., pp. 79-102.

60. Ibid., pp. 75-79 and 96-102.

61. *Employment and Training Report of the President,* 1979, U.S. Department of Labor, Washington, DC, pp. 87-89.

62. John Zalusky, "Shorter Hours—The Steady Gain," *AFL-CIO American Federationist,* January 1978; "Statement of John L. Zalusky, Economist, Research Department, AFL-CIO," Panel on Special Study of Economic Change, Joint Economic Committee, U.S. Congress, Washington, DC, June 14, 1978; and John L. Zalusky, "Alternative Work Schedules: A Labor Perspective," *CUPA Journal,* Summer 1979.

63. Taylor, "Work Sharing and Worklessness," p. 454.

64. Ibid., p. 453.

65. John Zalusky, "Alternative Work Patterns: A Labor Perspective," *CUPA Journal,* Summer 1977, Vol. 28, No. 3, pp. 54-56; John D. Owen, "Flextime: Some Problems and Solutions,"*Industrial and Labor Relations Review,* January 1977, Vol. 30, No. 2, pp. 152-160; and Jeffrey M. Miller, *Innovations in Working Patterns,* U.S. Trade Union Seminar, Washington, DC, May 1978.

66. Tyler, "Unions' Crusade."

67. Mills, "Leisure Sharing," p. 75.

68. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 87-88; and "Objectives and Effects" p. 17.

69. The economic concept of marginal utility stipulates that individual utility for a unit of income will increase as earnings decline (Samuelson, *Economics,* pp. 410-415).

70. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 92-94 and 99-101; "Objectives and Effects," p. 9.

71. "Objectives and Effects," p. 9; and Fred Best and Barry Stern, "Education, Work and Leisure—Must They Come in that Order?" *Monthly Labor Review,* July 1977, pp. 3-11.

72. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 92-95.

73. Ibid., pp. 93-94.

74. Ibid., pp. 94-95.

75. Hart and Sloane, "Working Hours," p. 28.

76. "Objectives and Effects," p. 18.

77. Ibid., p. 14; Hart and Sloane, "Working Hours," pp. 10-11; and Evans, "Make Jobs Go Round," p. 33.

78. "Objectives and Effects," p. 19; Evans, "Make Jobs Go Round, p. 33; and Tyler, "Unions' Crusade."

79. "Objectives and Effects," p. 25.

80. Hart and Sloane, "Working Hours," pp. 23-33; and Mills, "Leisure Sharing," p. 76.

81. Eli Ginzberg, Foreword to *Sharing Work to Combat Joblessness,* Special Report No. 28, National Commission for Employment Policy, Washington, DC, 1979, pp. 2-3.

82. Best, *Exchanging Earnings,* Fred Best and James Wright, "The Effects of Work Scheduling on Time-Income Trade-offs," *Social Forces,* Vol. 57, No. 1, September 1978, pp. 136-153; and Levitan and Belous, *Shorter Hours,* pp. 6-55 and 74-85.

83. Ralph E. Smith, "The Effects of Hours Rigidity on the Labor Market Status of Women," *Part-Time Employment and Flexible Work Hours,* Hearings of the Subcommittee on Employee Ethics and Utilization, U.S. House of Representatives, Washington, DC, May, June, July and October 1977, pp. 241-245; and Isabel V. Sawhill, "Economic Perspectives on the Family," *Daedalus,* Spring 1977, pp. 115-125.

84. Barry Stern, *Toward a Federal Policy on Education and Work,* U.S. Department of Health, Education and Welfare, U.S. Government Printing Office, Washington, DC, 1977, pp. 80-109.

85. Best and Stern, "Education, Work, and Leisure"; Fred Best, "The Future of Retirement and Lifetime Distribution of Work," *Public Policy and the Future of Work and Retirement,* Select Committee on Aging, U.S. House of Representatives, May 3, 1978, pp. 90-97; and Harold Sheppard and Sara Rix, *The Graying of Working America,* Free Press, New York, pp. 156-168.

86. Brenner, *The Social Costs of Unemployment;* and "Toward the Development of Manpower Indicators," *Manpower Report of the President,* 1968, U.S. Department of Labor, pp. 77-80.

CHAPTER 3
Assessing the Policy Options

As noted previously, consideration of worktime reductions as a strategy to combat unemployment has been severely hampered by a tendency to view work sharing in terms of only one of many approaches and by a lack of specifics concerning the approaches that have been proposed. The purpose of this chapter, and indeed the bulk of this volume, will be to describe the range of work sharing policies and proposals that are available and to assess the specific viability of each approach.

The public policy options to be discussed deal with the mechanisms that might be used to reduce worktime rather than different types of worktime reduction. For example, a shorter workweek is one way of spreading employment. However, there are many ways to stimulate this and other types of worktime reduction. This chapter will focus primarily on the various policy levers that might be used to foster work sharing, and only secondarily on the types of worktime reductions that would be created by these policies.

Some 17 public policies designed to redistribute existing and prospective employment opportunities will be reviewed. In an effort to develop a framework for considering these options, the policies have been grouped into four major

categories. The first category is made up of policies which provide income subsidies to individuals in order to induce worktime reductions or labor force withdrawal. The second category includes approaches which seek to limit worktime over weeks or longer periods via legal restrictions and economic disincentives for prolonged work activities. The third category presents a number of approaches clustered by the common objective of fostering long term partial forfeiture of pay raises resulting from economic growth or promotion for more time away from work. The fourth category includes government efforts to encourage institutional options allowing individuals to voluntarily exchange portions of current earnings for worktime reductions which might open jobs for the unemployed. These general categories and the 17 specific policy options will be discussed as follows:

Subsidized Worktime Reductions

1. Larger and Earlier Retirement Pensions
2. Opportunities for Prolonged Schooling During Youth
3. Worker Sabbaticals
4. Mid-Life Educational Leaves
5. Short-Time Compensation
6. Welfare and Income Maintenance Programs

Limitation of Worktime

7. Restriction of Overtime
8. Reduction of the Standard Workweek
9. Mandatory Vacations
10. Forced Retirement
11. Compulsory Education

Long Term Time-Income Trade-Offs

12. Neutralization of Tax Incentives for Selected Fringe Benefits
13. Public Subsidization of Fringe Benefits

14. Tax Incentives for Worktime Reductions
15. Encouragement of Flexible Benefit Options

Voluntary Time-Income Trade-Off Options for Individuals

16. Neutralization of Payroll Taxes
17. Subsidies for Worktime Reduction Options

The discussion will outline the nature of each of the four policy categories, then deal with each specific option separately. In many instances, the specific policy options can and have been combined. For example, higher pay for overtime work has frequently been proposed along with legislative reduction of the standard workweek. While such combinations are often used, the component approaches are nonetheless distinct and will, therefore, be assessed as isolated proposals.

The level of specificity of the 17 alternative work sharing proposals varies greatly. In some cases, proposals have been well developed and even brought to the point of implementation. In other cases, work sharing proposals have scarcely matured beyond the point of broad conceptualization. The discussion of policy options in this chapter will seek to pursue a middle range of specificity, generalizing those options which have become highly detailed and further elaborating those proposals which have been only broadly outlined.

Some of the 17 policy options will receive considerably more attention than others. Those receiving focal treatment include the options which either appear most promising or have tended to receive notable attention and support in the course of contemporary policy debates. In some cases, particular attention has been given to promising proposals which have, up to now, received only sparse elaboration and discussion.

Alternative work sharing policies will be given a preliminary assessment in accord with the general issues outlined in the previous chapter. To review: these issues will

include impacts on productivity and price stability, job creation and reduction of unemployment, level of participation and aggregate employment impact, influence on social equity and targetability, administrative efficiency and accountability, and secondary social effects. These preliminary evaluations will ultimately be summarized and compared in the final chapter.

SUBSIDIZED WORKTIME REDUCTIONS

Many public policies have been proposed and implemented which have the effect of redistributing employment by providing financial incentives which make it easier for individuals to forego worktime in one form or another. While most of these programs were not primarily intended as a means of reducing unemployment, current discussions of work sharing have cited their alleged impacts on the distribution of work. Public programs which have been singled out and examined for their work sharing potentials include larger and earlier retirement pensions, opportunities for prolonged schooling during youth, worker sabbaticals, mid-life educational leaves, short-time compensation, and welfare and income maintenance. These will be discussed in turn.

(1) Larger and Earlier Retirement Pensions

Both public and private retirement pensions have been used, in part, to redistribute employment by encouraging the withdrawal of older workers from the labor force. Publicly funded pension systems were first initiated by Germany in 1875, primarily for humanitarian reasons. The United States did not implement such a system until the Social Security Act of 1935, which was passed in part to combat unemployment by reducing the labor force.[1] Subsequently, this act has been amended several times to broaden coverage to over 90 percent of the labor force and reduce minimum eligibility age to

62, changes once again undertaken in part to reduce the number of persons holding or seeking jobs.[2] Private pensions also emerged in the late 19th century, but coverage was restricted to less than one-fifth of the labor force as late as 1940. However, numerous social forces expanded the portion of the labor force covered by private pensions to over 50 percent by 1970.[3] One reason for such expansion was the desire of both employers and employees to open jobs for younger workers.[4]

Available evidence suggests that the labor force participation rates of older workers have responded to the proportion of workers covered by pension programs, the level of pension benefits and the age requirements for benefit eligibility.[5] Thus, as coverage and benefits increase, and the eligibility age declines, the proportion of older persons seeking and holding jobs has declined.[6] This has caused advocates of public and private pension programs to note their potential for redistributing employment according to age.[7]

Preliminary assessment suggests that earlier retirement options and increased pension benefits would be an inflationary way of inducing worktime reductions in order to share employment. Since pension levels commonly amount to 50 percent or more of take-home earnings prior to retirement,[8] the prospect of funding more and larger pension payments without productive returns would be a costly proposition for governments, firms and individual taxpayers.[9] Similarly, lowering of pension eligibility ages, even at reduced benefit levels, would also require significant expenditures. For example, one study estimated that the isolated effect of a reduction of the average retirement age in the United States from 65 to 62 would result in about a 20 percent increase of total public pension costs by the year 1990.[10] Further, pension programs to induce earlier and more extensive retirement would become increasingly expensive in future years. As the large post-World War II "baby boom" generation

ages to retirement, proportionally smaller younger generations will be severely taxed to finance the pensions of older cohorts.[11] Additionally, retirement age populations are tending to live longer. Specifically, the average life expectancy for persons aged 65 was 12.2 years in 1930, 16.0 in 1976,[12] and projected to be 16.8 years in 2000.[13] Thus, the elderly population will not only be larger during the initial years of retirement, but also draw pension benefits for an increasing number of years.

The impact of earlier and more extensive retirement upon unemployment and job creation would likely be mixed. On the surface, there is little doubt that increased retirement reduces labor force size. As an illustration, a combination of social forces and government programs in the United States has contributed to a decline of labor force participation rates for men aged 65 and over from 54 percent to 20 percent between 1930 and 1978,[14] and a decline for all persons age 65 and over from 27 percent to 13 percent between 1948 and 1978.[15] If the participation rates for all persons 65 and over had remained at the 1948 level up through 1978, there would have been about three million additional workers holding or seeking jobs in recent years.[16]

Whether or not the withdrawal of these workers has opened jobs for others is a matter of conjecture. One would assume that complete and permanent withdrawal of workers would require near total replacement. However, this need not always be the case. Many employers plan on attrition from retirement and other sources to allow humane displacement of labor in response to capital improvements and necessary economic realignments.[17] In many cases, skills lost with the retirement of senior employees may not be directly replaceable by new or younger workers.[18] Further, a significant portion of pension-receiving retirees leave their original job only to take up another, thus attenuating the impact of earlier retirement on unemployment.[19] Finally, unemployed

or marginally employed older workers who choose early retirement as an honorable solution to their plight do not release jobs for others.[20]

As an indication of job release potential, the British Department of Employment estimates that a reduction of the statutory retirement age from 65 to 60 years would create 200,000 positions for the unemployed in the first year and something like 600,000 jobs after three years; but that the total hours of new employment created in this fashion would only amount to about one-fourth the worktime foregone by retiring workers.[21] To insure replacement of retiring workers with the unemployed, Britain and Belgium instigated "job release schemes" in early 1977 and mid-1976 respectively, which require that employees retiring early with special benefits be replaced by a person under age 30 who is registered as unemployed.[22] While such schemes have a high job yield, their replacement requirement greatly reduces participation. Specifically, by early 1978 only 23,800 British workers (one-tenth percent of the British labor force) had participated in the program, and 26,000 Belgium workers (about one-third percent of the Belgium labor force) had participated by July 1977.[23] While participation is certainly diminished, such job release schemes are certainly more cost-efficient than regular pension programs in terms of creating new employment opportunities. Thus, it would appear that the potentials of earlier and expanded retirement programs to combat unemployment would be notably enhanced by some form of new hiring requirement.[24]

The viability of income subsidies to encourage earlier and more widely spread retirement as a work rationing mechanism is likely to be limited in the United States. Earlier retirement has become so prevalent that the average American male was spending almost 17 percent of his lifetime in nonwork during "old age" in 1980 (see figure 1, ch. 1).[25] Recent survey research concerning retirement age

preferences indicates that trends toward earlier retirement may have reached a point of "diminishing returns" for American workers, such that few would desire to retire earlier[26] and many would prefer to retire later (see table 3-1).[27] Finally, there are notable indications that a growing portion of the U.S. labor force is losing trust in the fiscal solvency of today's pension programs. For example, one national survey conducted in 1980 found that 73 pecent of Americans aged 25 to 44 had little or no confidence that the Social Security system would have the funds to pay benefits when they retire, and about 57 percent of those aged 45 to 65 felt likewise.[28] In short, emerging evidence suggests that the multi-decade movement toward early retirement may be ending and possibly reversing.

The effects of pension liberalizations on social equity and selected target groups is unclear. For those desiring or needing to withdraw from the labor force but too poor to do so, enhanced pensions covering more workers would provide a welcome option. Similarly, increased pension benefits would benefit those with marginal or inadequate retirement incomes. At the same time, cautions must be made about potential negative effects. First, the benefits provided by most pension programs do not keep pace with inflation, and as life expectancy at retirement age rises, it can be expected that many who choose early retirement will be doomed to poverty in the last years of their lives. Second, it should be kept in mind that provision of retirement pensions for the large post-World War II "baby boom" generation will place extreme financial burdens on the working population during the late 20th and early 21st centuries.[29] Third, whether or not jobs released by earlier and more extensive retirement would go to those with the greatest need would most likely have to be determined by explicit targeting provisions. For example, just as British and Belgium job release schemes require that vacated positions be given to unemployed persons under age

30, similar requirements or incentives might encourage the hiring of the long term unemployed.

Income subsidies to encourage earlier and more extensive retirement would not likely be flexible in terms of implementation and termination. While there are some exceptions to the rule,[30] retirement is a permanent state. Those who retire commonly find it difficult to find new jobs or regain their former positions;[31] and employers rarely have the means to recall previously retired employees. Thus, it would appear that earlier retirement would not allow much in the way of flexibility for adjustment to medium- and long-range labor market conditions. Most particularly, labor scarcities projected as a result of the eventual withdrawal of the 1940-1950s "baby boom" generation from the work force in the early 21st century could be further intensified by liberalized pension programs. At the same time, it should be noted that a good deal of flexibility could be built into pension programs through phased and reversible retirement provisions, as well as part-time retirement options.[32]

In its simplest forms, stimulation of earlier and more extensive retirement via liberalized pension benefits should be administratively feasible. For the most part, changes in pension programs could be accomplished by actuarial adjustments which would not require total system redesign. Regulation could, however, prove more difficult. Current procedures could be enlarged to insure that pension benefits are distributed in accord with the work and earnings status of beneficiaries. However, regulations to insure some degree of new hiring as a result of the withdrawl of older workers would likely harbor significant added costs and problems.

The secondary social impacts of earlier retirement are highly controversial. The institution of retirement evolved as a result of many social changes and problems, one of the least important of which was combating joblessness. Current

Table 3-1
Worker Retirement-Age Worktime Preferences by Selected Social Characteristics (percentage breakdowns)

Social characteristics	No work at all	Part-week work	Part-year work	Full-time work	Not sure	Correlation (Cramer's v)	Number of respondents
Total	**23.1**	**44.9**	**10.4**	**9.1**	**12.5**	NA*	**955**
Occupation						.1402	
Prof-tech	19.4	50.6	13.3	11.1	5.6		180
Managerial	18.5	45.4	10.9	9.2	16.0		130
Clerical-sales	22.2	48.4	13.5	3.2	12.7		126
Skilled labor	27.1	43.8	9.6	6.3	13.3		240
Operatives-laborers	34.9	34.3	6.0	10.2	14.5		166
Service	11.2	48.0	8.2	16.3	16.3		98
Farm	0	61.5	15.4	15.4	7.7		13
Total family income						.0944	
Under $4,999	19.0	52.4	7.9	9.5	11.1		63
$5,000-$9,999	13.1	48.3	11.0	11.7	15.9		145
$10,000-$14,999	24.6	44.6	10.8	6.2	13.8		195
$15,000-$19,999	27.7	46.1	8.9	6.8	10.5		191
$20,000!$24,999	26.3	42.1	12.0	10.5	9.0		133
$25,000-$34,999	28.0	47.7	12.1	2.8	9.3		107
Over $34,999	22.4	40.0	11.8	15.3	10.6		85
Sex						.0559	
Men	24.4	44.0	10.7	9.3	11.6		614
Women	20.8	46.6	9.7	8.8	14.1		341
Union affiliation							
Member	33.7	40.1	9.4	4.5	12.4		202
Nonmember	20.5	46.2	10.4	10.3	12.3		741

e						.1276	
Under 25	14.6	42.7	9.4	14.6	18.7		171
25-34	19.2	46.9	14.6	7.3	11.9		260
35-49	29.1	40.7	12.3	6.0	11.9		285
50-64	27.7	48.2	4.5	10.3	9.4		224
Over 64	7.7	76.9	0	15.4	0		13
ce						.0809	
White	21.8	45.5	11.2	9.2	12.3		818
Nonwhite	31.1	41.7	4.5	9.1	13.6		132

URCE: 1978 national survey.

ESTION: Considering your expected financial situation and ability to stay in or change your current line of work when you reach retirement , which of the following worktime options would you personally prefer at age 65: (A) no work at all; (B) work part time or short workweeks r around (with vacations); (C) work full time for only a portion of the year; (D) work full time year around (with vacations); (E) not sure. ata not applicable.

discussions of the social costs and benefits of existing and proposed retirement systems are volatile.[13] All in all, it is probably fair to say that earlier retirement helps some and hurts others, and that more retirement age options for individuals would foster the greatest social well-being. As such, it seems reasonable to suggest that the option, but not the requirement, of retiring earlier may have many social benefits.[14]

In overview, it appears that pension liberalization fostering earlier retirement would have inflationary costs, produce a moderate number of jobs depending on new hiring requirements, and present a number of significant but manageable secondary problems.[15]

(2) Opportunities for Prolonged Schooling During Youth

The extension of school years during youth has frequently been mentioned as a means of reducing the supply of labor and therefore lessening unemployment.[16] Aside from extending compulsory school enrollment (which will be discussed later), time spent in school during youth can be prolonged by increasing educational opportunities through subsistence funds for students and accessible educational institutions. Presumably, young persons desiring education would respond to available resources by postponing entry into the labor force, and therefore relieve competition for jobs.

The idea of providing public support for students pursuing prolonged schooling emerged as a result of many factors. Public student assistance gained its first major impetus in the United States with educational grants provided in the post-World War II "G.I. Bill." During the 1950s, the successful launching of the Russian Sputnik catalyzed intensive arms and space races and a national commitment to better educate the American labor force. This commitment, coupled with a parallel objective of insuring equal educational opportunity

to all qualified persons, lead to a massive expansion of college enrollment and educational attainment during the 1960s.[37] Policymakers of the times have noted that the impact of such educational opportunity in postponing the labor force entry of the large post-World War II "baby boom" generation was not an altogether unplanned side-effect.[38] There can be little doubt that this inducement of prolonged schooling significantly relieved unemployment during the 1960s and 1970s, thus causing some persons to suggest expanded student financial assistance as a means of combating contemporary unemployment.

Initial indications are that a general expansion of educational opportunities would be a relatively costly way of sharing work and provide little productive gain. The costs of providing student loans or grants as well as educational facilities would be considerable, while the value of a better educated labor force to economic production would likely be negligible. In the case of the United States, there appears to be a surplus of highly educated workers.[39] In most cases, even highly trained labor force entrants must be given specific on-the-job instruction which is costly to employers;[40] and underutilization of pre-existing educational attainment may actually reduce productivity due to job dissatisfaction, high turnover, absenteeism and other personnel problems.[41] However, nations other than the United States with low or uneven educational attainment may find that the expansion of educational opportunities may be relatively uncostly in comparison to other employment programs, as well as provide skills and knowledge needed by employers. Further, even when educational attainment is underutilized, increased training opportunities for specific job-related skills may yield significant productive returns. Finally, some of the costs of prolonging education among the young might be nullified by repayment of student educational loans. Nonetheless, it can be expected that expanded educational

opportunities would be a costly way of reducing the size of the labor force, and that low productivity returns on these costs could ultimately be inflationary.

It would appear that increased school enrollment would effectively reduce the number of job seekers. However, it should be noted that a large portion of students are enrolled less than full-time, that both full- and part-time students frequently seek and hold jobs, and that the incidence of job holding among students increases with age.[42] Unless work restrictions are imposed on students, it is likely that only a portion of young persons taking advantage of expanded educational opportunities would totally postpone labor force involvement.

The impact of prolonged schooling on delayed or reduced work force activity may not be as great in the future as it has been in the past. For a number of reasons, young persons of the future are not likely to be as willing to forego earnings and commit time and money to extended schooling as their counterparts of the 1960s and 1970s. While norms of educational achievement have risen,[43] the surplus of highly trained workers is causing the economic and social returns to the individual for prolonged schooling to decline.[44] As an illustration, while college graduates continued to earn more than high school graduates in the United States, the advantage fell from 53 percent to 40 percent between 1969 and 1971.[45] Presumably, these trends will cause a declining interest in prolonged schooling. At the same time, the small size of current and future school age generations (as compared to the post-World War II "baby boom" generation) is likely to foster an inadequate supply of entry level workers. In contrast to the conditions of the 1960s and 1970s in which young persons stayed in school longer because there were no jobs available, future school age generations may be increasingly prone to leave school because entry level job opportunities will be more available to them. Thus, there will be a smaller

number of young persons who might prolong schooling, and these young persons may be less likely to postpone labor force activity to take advantage of opportunities for prolonged education. As such, any relief of unemployment resulting from increased educational opportunity for the young is not likely to be as great as that occurring in the past.

Of course, expanded educational opportunities for younger persons tend to enhance social equity, and these opportunities could be effectively targeted to groups with the greatest need. Studies abound which demonstrate that employment and social mobility are, as many times as not, distributed to individuals as a result of irrational and even unjust conditions.[46] Schools, for all their shortcomings,[47] tend to perform a "sorting and selecting" function which encourages the distribution of social and occupational opportunities in accord with demonstrated abilities and motivation.[48] Expanded access to education tends to improve the distribution of employment to groups with the greatest need. As such, it would appear appropriate to target access to educational opportunity to selected groups for reasons other than work sharing.

The expansion of educational opportunities has both flexible and inflexible aspects. For the individual, flexibility is considerable and changes in educational methods suggest that this flexibility is likely to increase.[49] Further, it would be reasonably easy to adjust the availability of student financial assistance in accord with labor market conditions. At the same time, the establishment and maintenance of educational institutions is an expensive and somewhat inflexible undertaking. Similarly, the administration and regulation of institutions providing educational opportunities as a means of redistributing work presents a mixed picture. On one hand, student aid, like retirement pensions, could likely be run smoothly with existing apparatus. On the other hand,

the development and maintenance of educational facilities would be costly and cumbersome.

Educational opportunity, like retirement programs, has many purposes, the most important of which is not the redistribution of available employment. As already noted, schools teach basic skills necessary for employment and specific on-the-job training. They also provide some semblance of equal opportunity within an irrational and somewhat unfair world. Additionally, educational systems provide custodial services, a means of preparing young persons for citizenship, and, for many, a valuable form of leisure and source of self-enrichment. In short, the social benefits to expanding educational access are substantial and independent of work sharing implications.

In overview, expansion of educational opportunities for the purposes of slowing labor force growth would be relatively costly and offer limited relief for those who are jobless in future years. Ultimately, it seems that the value of increasing access to prolonged schooling for the young should be assessed on the basis of criteria other than employment impacts.

(3) Worker Sabbaticals

A number of proposals have been made for sharing employment through public worker sabbatical programs. In general, these proposals would provide workers with some portion of their normal incomes during an extended period away from work after several years of consecutive employment. It is reasoned that such staggered withdrawal of a significant portion of the work force would require new hiring that would relieve the unemployment problem. This basic idea must be viewed as somewhat exotic and improbable for the foreseeable future. Nonetheless, recent surveys on work time preferences suggest that the sabbatical

concept is attractive to a large portion of the labor force (see table 2-4).[50] and therefore meriting some attention.

The sabbatical concept is literally ancient. The idea was embraced by the Jewish faith as far back as the 6th century B.C., and subsequently adapted by christianity and other religions.[51] The first notable secular application of the idea occurred in 1880 when Harvard initiated the first academic sabbatical. Ten major campuses had such programs by 1910, 58 by 1922, and over 300 of the 575 existing colleges and universities by 1932.[52] Although there were erratic efforts to apply the concept to high school faculty and other occupations,[53] the sabbatical remained almost exclusively within the domain of higher education for decades.

Aside from a 1945 proposal to combat unemployment with a national sabbatical program,[54] the idea received scant attention until the 1960s. At that time, the combined influence of recessionary downturns and fear of widespread worker displacement due to automation fostered consideration and limited applications of sabbaticals. Most notably, U.S. steel and aluminum workers obtained a 13-week "sabbatical" through collective bargaining,[55] and then Secretary of Labor Willard Wirtz and others proposed consideration of national programs for the dual purposes of spreading employment and upgrading labor force skills through retraining.[56] However, public policy discussion of the concept faded, and only minor initiatives were made by a few large corporations which developed limited executive sabbatical programs primarily for the purposes of management renewal and provision of social service.[57] High unemployment during the mid-1970s once again catalyzed a host of proposals for national sabbatical programs.[58]

Proposals put forth during the 1970s for sabbaticals varied greatly. All provided for some type of income maintenance during the period away from work, but the level of income

maintenance varied greatly. Most required that participants not work on paying jobs while on leave and many required some type of educational activity. Most also guaranteed job return rights to participants and allowed some flexibility in the timing of sabbatical leaves. Some include a forfeiture of some or all of personal sabbatical savings for not participating. The greatest area of variation concerned the source of funding (see figure 2).

The impact of a national worker sabbatical on economic productivity and price stability would depend, in large part, on the means of funding the program. Some programs would be highly volunteeristic and funded by some type of forfeiture of income by individuals, thus posing no extra direct costs to firms. The implications of this type of sabbatical are discussed in a later section dealing with voluntary time-income trade-offs. Virtually all proposals mentioned above entail funding from new taxes, expenditures from existing income maintenance programs, or new allocations from general revenues. If new taxes were levied completely or partially on firms, they would likely increase the costs of production and the prices of output.[59] If sabbaticals were funded directly or indirectly from general government revenues through deficit spending, it would tend to foster inflation.[60] Consideration of sabbaticals also raises some interesting questions about the impact of program actuarial arrangements.[61] As in all work sharing proposals, these costs must be compared to the costs of dealing with unemployment in other ways.[62]

The effects of sabbaticals on productivity and price stability will also entail the impact of such programs on the economic efficiency of participating firms. Periodic and prolonged absence of employees will certainly create organizational inefficiences due to lost continuity of operations, new hiring and training, and administrative complications. Such inefficiencies, coupled with the income maintenance costs of

sabbaticals, would almost assuredly reduce economic productivity and increase the costs of goods and services.[63]

As with most work sharing proposals, there are varying opinions concerning the job creating and preserving capacities of sabbaticals. Advocates of this approach to sharing employment claim that this type of worktime reduction would be particularly effective because extended absence would force employers to replace departed workers in order to maintain production. Such advocates estimate that the proportion of foregone worktime transormed into new employment might range from 75 to over 100 percent.[64] Others are more reserved about the job creation potentials of the sabbatical. There have been many claims and observations that employers could not find adequate trained replacement labor,[65] particularly if sabbatical leaves are not scheduled evenly over time.[66] It has also been claimed that employers will seek to avoid new hiring by use of slack personnel,[67] investment in labor saving machinery, and postponement of leaves.[68] Correspondingly, it has been claimed that workers will also seek to postpone or avoid sabbaticals and take new jobs when on leave.[69]

The few cases in which sabbaticals have been actually tried provide varied and inconclusive indications of their potential to create or preserve jobs. Reports on the employment impacts of the U.S. Steel sabbatical are mixed and data less than satisfactory. At the beginning, David McDonald, then President of the U.S. Steelworkers, claimed that the program was opening as much new job time as that foregone by workers taking sabbaticals.[70] However, he was never explicit as to whether this was new hiring for the unemployed or preservation of employment for workers in an industry requiring a declining number of employees.[71] Steel management agreed that the sabbatical would cause new hiring, but has remained noncommittal on the extent of job creation or preservation.[72] One of the few attempts to assess the employ-

Figure 2
Comparative Outlines of Worker Sabbatical Proposals

Proposal	Frequency and length	Income maintenance	Funding source	Other features
Melching and Broberg (1974)	1 year every 7 years	$4,000 minimum (1974 dollars), with added income according to family size	General revenues	•Universal eligibility determined by Social Security number •Optional participation •Forfeiture of benefits unless delay appealed •Job return rights •No paid employment while on sabbatical
O'Toole (1973)	6 month sabbatical every 7 years	70 percent of normal income up to $5,600 (1973 dollars) for a half year	UI system and educational programs	•Restricted by age or industry, or universal eligibility •Optional participation •Time must be used for education
Fraiser (1974)	1 year every 7 years	Value of accrued monthly Social Security pension	Advance draw on Social Security pension	•Universal eligibility for all persons with 10 years of Social Security contribution •Optional participation
Rosenberg (1976)	3 months leave every 7 years	76 percent of normal income	Special worker payroll tax and UI system	•Experimental restrictions •Optional participation •Delayed use possible •Job return rights •No restrictions on use of time while on leave
Sugarman (1977)	1 year every 10 years	Full maintenance of normal take home income	6 percent payroll tax paid by worker and employer	•Near universal eligibility optional, but 50 percent of benefits lost if sabbatical not taken •Delayed use possible •Job return rights •No paid employment while on sabbatical

Feinstein (1977)	1 year leave, frequency unstated	$10,000 annual scholarship (1977 dollars) plus educational expenses	General revenues	•Restricted to workers in industries and areas with high unemployment •Sabbatical granted through application process •Job return rights •Sabbatical must be used for education •Employer must hire new replacement worker
Lehner (1978)	6 months leave every 10 years	Value of weekly UI entitlement	UI system, refunded by transfers from Social Security fund and financed by higher Social Security tax	•Universal eligibility for all workers covered by unemployment insurance •Optional participation •Delayed use possible •Job return rights •No paid employment while on sabbatical

SOURCES: Dolores Melching and Merle Broberg, "A National Sabbatical System: Implications for the Aged," *The Gerontologist*, April 1974, pp. 175-181; James O'Toole, *Work in America*, MIT Press, Cambridge, 1973, pp. 119-139; Donald Fraiser, "Social Security Sabbaticals: A New Dimension for the Social Security System," *Congressional Record*, August 22, 1974, pp. H8939-H8940; Robert Rosenberg, "A Pilot Project for Extended Leaves," Working Paper No. 10, Office of Research, California State Senate, Sacramento, CA, December 1976; Jule Sugarman, "The Decennial-Sabbatical Plan," *CUPA Journal*, Vol. 28, No. 3, Summer 1977, pp. 47-52; Otto Feinstein, "The Workingman's Sabbatical," unpublished paper, Wayne State University, December 1977; and Edward Lehner, "Towards Sabbaticals for Every Worker," *New York Times*, December 16, 1978, Editorial Page.

ment impact in the early stages of the program found that only 16 workers were hired for 41 on a sabbatical in one small plant.[73] However, these reports have been unclear as to whether these new hirings were permanent or temporary. Since 41 13-week sabbatical leaves roughly equals ten full-time jobs, 16 permanent new hirings (presumably at the less trained entry levels) would be an excellent job yield. Otherwise, it is safe to say that some portion of foregone worktime went to preserving current jobs or was lost due to managerial efforts to avoid new hiring.

Other sabbatical programs provide mixed evidence concerning job creating potentials. There are frequent reports of how the sabbatical absences of professors teaching key courses have led to the hiring of new faculty for temporary periods within academia. However, there appear to be an equal number of cases in which no new hiring occurred. In the case of a voluntary sabbatical program within California's Alameda County, which will be discussed in a later section, every four persons choosing to take a three-month sabbatical led to the employment of one full-time worker.[74] In Sweden, three public policies approach the characteristics of the sabbatical. The first is the parental leave program, which allows one parent to take up to six months leave with full pay after the birth of a child. The second is a national vacation law which guarantees all workers at least five weeks of paid vacation each year and allows one week to be postponed so that it is possible to take a ten week mini-sabbatical every five years. The third is an education leave program which allows prolonged leaves with pay for retraining. While there is no direct empirical link between use of these programs and the extent of joblessness, many observers believe that participation helps to keep the Swedish unemployment rate at a remarkably low and constant rate of around 2 percent. All in all, it appears that the job creating and saving potentials of sabbaticals will vary greatly according to the nature of participating organizations.

What then would be the aggregate impact of a widespread worker sabbatical program on employment? One dated 1966 survey of 100 varied corporate presidents found that only 38 percent favored sabbaticals in their own organization, and those favoring the concept did so only for managerial and professional personnel.[75] A previously cited 1978 national survey found that about 42 percent of the labor force would forego 2 percent or more of their current income and that 66 percent would forego some 40 percent or more of a 10 percent pay raise for some type of sabbatical.[76] Taking the later survey as an indication of potential worker participation, the average 1978 American worker would only forego 2.1 percent of current earnings for a sabbatical. At the maximum, this would only mean a 2 percent increase in employment, and, most likely, notably less than full replacement of time foregone with new employment. Of course, the sharing of the basic costs of a sabbatical program by employers, government and workers could increase acceptance and participation in such a program. However, the direct and indirect costs of such a program could be expected to ultimately limit participation. Thus, it is likely that the aggregate job creation potentials of the sabbatical would not greatly surpass the potentials indicated by the previously noted voluntary time-income trade-off preferences.

The notion of a worker sabbatical raises a number of questions about the equity and targetability of such proposals. While sabbaticals would open jobs to the unemployed and provide retraining opportunities for the underemployed, they might also lead to discontinuities in the occupational advancement of persons who have struggled to attain a "take-off" point in their careers. It is also possible that a sabbatical program funded by the general populace would be inequitably used by select occupational groups such as professionals or unionized workers.[77] There is also an important issue concerning the level and value of income provided to

workers on sabbatical. Most notably, inflation could eat away the real dollar value of sabbatical income so that the benefits received are not equal to the amount contributed. It has been suggested by one proposal that eligibility for sabbaticals be targeted to areas or groups experiencing high unemployment in order to create jobs for those in greatest need.[78] This could focus the employment impact of such programs, but also lead to a sharing of jobs among those least able to sacrifice.

Assessment of the flexibility for implementing and terminating sabbaticals must be undertaken at either the societal or firm level. From the societal perspective, a universal or near-universal sabbatical program would be rather inflexible. Like the Social Security system, large constituencies would acquire vested interest in the program. For better or worse, it would be difficult to terminate once implemented. At the firm level, sabbaticals would have both flexible and inflexible elements. As in the case of the U.S. Steel sabbatical program, provisions could insure a reasonable amount of discretion to both employers and employees in the timing of leaves.[79] At the same time, it is exactly the inflexibility of prolonged labor departures that advocates of sabbaticals claim are the greatest job creating strength of this form of work sharing.[80] Thus, rigidities at the firm level are at once a desirable and undesirable aspect of these proposals.

There can be little doubt that a government sabbatical program would present a number of difficult administrative challenges. While development of the funding and income maintenance aspects of such a program would be no easy accomplishment, there is no question that a reasonably efficient system could be developed. The major difficulties would come with the regulation of the program to insure participant rights and prevent abuses. One of the greatest difficulties would stem from efforts to insure job return rights to participating employees. Advocates claim that such

rights could be provided in the same manner as post-World War II statutes, which provided such options to returning soldiers.[41] However, it is well known that such rights are extremely difficult to guarantee. In the cases where sabbaticals require educational activities and abstinence from paid employment,[42] there would be regulatory difficulties. Enforcement of training endeavors would be feasible though costly, but current difficulties with detecting "subterranean work" suggest that the prevention of paid activities would be extremely cumbersome. In addition, there would also be complications in guaranteeing departure rights, providing mechanisms for the transfer of earned sabbatical time for workers changing employers, and determination of exceptions to overall program guidelines. All in all, a public sabbatical program would be cumbersome to administer.

One of the reasons that sabbatical proposals have come to the forefront in recent years is their potential to serve a multitude of secondary social purposes. Indeed, it might be claimed that the sabbatical concept has been justified more on the basis of these social impacts rather than its potential as an employment policy. There are many appealing aspects to the sabbatical. It represents a form of free time that allows people a chance to accomplish things that might otherwise be very difficult or impossible. Specifically, sabbaticals provide an opportunity for a prolonged and total break from daily and yearly routines. Such prolonged leaves could be used for any of a number of purposes, including returning to full-time school, care of young children, extensive voluntary service, entrepreneurial business efforts, initiation of a new career, construction of a new house, or simply a period to reassess one's life.[43]

Despite the attractive social returns that might accrue from widespread sabbaticals, the costs of providing such a program make it an unlikely prospect for the near future. Nonetheless, the concept may merit further attention.

Specifically, efforts might be made to encourage the development of sabbatical programs on a limited basis within the public and private sectors and to evaluate those that currently exist.[44]

(4) Mid-Life Educational Leaves

It has been suggested that competition for available jobs might be reduced by encouraging workers to periodically return to school in order to undertake educational programs which would update skills, facilitate mid-life occupational changes, or simply allow self-renewal and enrichment.[45] As in the case of worker sabbaticals, such extended leaves for education would make it necessary for employers to hire new workers to replace employees who have temporarily left for mid-life educational programs; periodic withdrawals by a significant portion of the work force would create a situation in which jobs are shared and rotated among a larger number of persons.[46] For the most part, it can be expected that the impacts of such leaves on productivity, employment and other areas of concern would be essentially the same as those previously discussed for the worker sabbatical. However, it is likely that participation would be limited by worker interest in mid-life schooling and the formal learning requirements of such programs.[47]

(5) Short-Time Compensation (STC)[48]

One of the most promising approaches to work sharing entails the provision of partial unemployment insurance benefits to employees in work groups that experience workweek reductions in order to prevent layoffs or dismissals within a specific firm. As a rough illustration, if a firm were to reduce the workweek and pay levels of its employees 20 percent rather than lay off 20 percent of its workers, those employees working short-time would receive one-fifth of the weekly unemployment insurance they would

have received if totally laid off. Thus, employees on reduced workweeks would be partially reimbursed for lost earnings and no workers would lose their jobs.

Although such "short-time compensation" programs have been widespread and reportedly successful within many European nations since the 1920s, the unemployment insurance system was not used for such purposes within the United States until 1978. Many U.S. unemployment insurance programs have provisions for paying partial benefits for less than a full week of unemployment,[89] but only in amounts roughly equal to the dollar amount of full weekly UI benefits minus the income earned during the week in question. A quick example demonstrates why such partial benefits are not suitable for work sharing. If an employee earns $250 for a full 40-hour workweek and is eligible to receive $100 in benefits for a week of unemployment, he or she could not receive benefits for working a reduced 32-hour workweek because earnings for more than two days employment would total over $100.

With short-time compensation provisions, UI benefits would be paid as a proportion of the maximum benefits available to an individual for a given week if the lost time equals or surpasses an established minimum worktime reduction. Thus, a worker eligible to receive a maximum of $100 in weekly benefits could receive about one-fifth that amount, or $20, for every full day of lost work. Although each state has the discretion to adjust its unemployment insurance system to allow compensation for reduced workweeks, only California had put such a program into effect as of February 1981.

Foreign Short-Time Programs. Programs similar to those being considered in the United States have been in effect within other nations since the 1920s.[90] Among the nations reporting use of such programs are the Federal Republic of Germany, Belgium, France, Italy, Great Britain, Luxem-

burg, Denmark, Netherlands, Norway, Austria, and most recently Canada.[91] Of the varied short-time benefit programs, the German program most closely parallels the framework that is being discussed within the United States. Since this program is the oldest and best documented of such approaches, an examination of its details can provide useful insights for policymakers and planners within the United States.

The West German program is administered by the Federal Labor Institute (Bundesanstalt fuer Arbeit), an independent tripartite organization composed of labor, business and the government which administers unemployment insurance and other labor market programs.[92] Since worker eligibility for short-time benefits is determined by eligibility for unemployment insurance, it can be said that short-time compensation (STC) is administered within the context of the UI system.[93] All Federal Labor Institute programs are financed by a 3 percent payroll tax divided equally between employers and employees up to an earnings ceiling.[94]

The German short-time program is available to firms with at least one paid employee. To gain eligibility, a firm must demonstrate that a reduction in hours of labor is unavoidable, and that worktime reductions with short-time benefits will prevent the dismissal of employees.[95] Further, employers must document that worktime reductions of 10 percent or more have been made for one-third or more of their employees for a period of at least four continuous weeks.[96] Although some consideration has been given to using the program for long term adjustment assistance, eligibility to firms that show signs of permanent decline has traditionally been denied.[97]

Despite generally laudatory reports from European representatives of labor, business and government about the value of short-time programs,[98] a number of reservations have been expressed about the applicability of the concept in

the United States. Less intense labor market competition for workers among American employers may make the program far less attractive to U.S. firms. Additionally, established mechanisms for cooperative labor-management decisions in Europe are likely to make STC more acceptable abroad. Further, large portions of European fringe benefits are administered by the government, thus reducing fixed costs of labor barriers which would likely deter U.S. firms from participation. Finally, the maximum benefit ceiling for the German STC program is considerably higher than most American ceilings. In Germany, maximum UI and STC benefits are determined annually to be 163 percent of average gross earnings for all insured workers, while the highest UI ceiling in the United States is a relatively low 70 percent of the average weekly income of covered workers.[99] This difference is assumed to reduce opposition from senior employees in Germany to a much greater degree than would be likely in the United States.

Short-Time Compensation Programs in the United States. Consideration of using short-time compensation within the United States emerged as a response to the aggravated unemployment problems in New York City during 1975. The "Poses Plan," as it came to be called, was generally supported by a highly publicized conference of business, organized labor, and academicians.[100] The proposal received considerable press attention in the New York area and the persistent support of many groups because it appeared to have the potential to both reduce joblessness and minimize back slippage of affirmative actions gains by preventing the layoff or dismissal of minorities.[101] In March 1976, a short-time compensation bill was introduced to the New York State Assembly.[102] However, the bill died in committee due to technical complications.

Federal interest in short-time compensation has progressed cautiously. During 1978 and 1979, the U.S. Department

of Labor established a special task force to monitor existing programs, make preliminary assessments of the concept, and explore the possibility of funding a pilot study.[103] Most recently, federal legislation has been introduced to Congress to support the development of state programs.[104]

Independent of federal initiatives, California established an experimental statewide program in mid-1978. Hearings held by the State Senate to explore the general topic of work sharing drew attention to the short-time compensation concept in November 1977.[105] In response to expected unemployment resulting from the Proposition 13 tax cutting referendum, State Senator William Greene introduced and gained passage of a "Work Sharing UI" program during July 1978. The program was rapidly signed into law by Governor Edmund Brown, Jr., and implemented. Although the widespread layoffs expected from Proposition 13 did not occur, the program was renewed in July 1979 and is being administered as a prolonged experiment.[106] The basic design of this California program is similar to the German program. Work Sharing UI is operated by the California Employment Development Department which administers, among other programs, Unemployment Insurance, Disability Insurance and the California State Employment Service.

The legislation creating Work Sharing UI provides that an employer facing an economic downturn may choose, instead of layoffs, to reduce the hours and corresponding wages of all or a designated part of his or her work force and share the work remaining among those employees. The reduction must involve not less than 17 percent of the employer's regular permanent work force involved in the affected work unit or units. Additionally, the hours and wages of the affected employees must be reduced by 10 percent or more. Each participating employee is eligible to receive a weeky unemployment insurance benefit proportional to the percentage of his or her wage and hour reduction.

The program was designed to operate within the existing California unemployment insurance system. Each employee must therefore meet basic UI eligibility requirements to receive work sharing benefits. California eligibility requirements are relatively liberal. In 1980, a worker must have earned at least $900 in wages during the 12-month "base period" prior to receiving benefits. That amount of earnings would provide, however, only minimal regular unemployment insurance weekly benefits of $31. The 1980 weekly ceiling for unemployment insurance benefits was a maximum of $120 if the recipient earned $4,160 or more in the highest quarter of his or her base period. Thus, a worker who is eligible for maximum weekly benefits would receive about $24 for each day lost out of a workweek. Benefits and ceilings in other states vary substantially, with some higher and others lower.

The California legislation allows the payment of Work Sharing UI benefits to each participating employee for up to 20 weeks during a 52-week period beginning the first week benefits are paid. Workers laid off after this 20-week duration period are eligible for regular UI with a duration reduced slightly to reflect the dollar costs of the work sharing benefits already received.[107]

Opinions collected from representatives of participating firms and unions provide provisional indications that the California program has been generally well received. Early in December 1979, representatives from 30 of the firms which actually used Work Sharing UI were interviewed by phone. Of these firms, 25 strongly favored the program and 5 were neutral.[108] Firm representatives favored the program because it helped them retain valued employees, was generally appreciated by workers, and was easy and flexible to administer. Representatives from 30 of the 36 local unions participating in the program prior to December 1979 were also interviewed. Some 14 favored the program, 3 were neutral or

unaware of the program, and 3 had not actually used the program. Major reasons for approval were that use of Work Sharing UI was fairer than layoffs and that workers in general were better off financially because only a portion of earnings were lost and most fringe benefits were maintained. Four union representatives reported initial resistance to the program from their members, but also noted that opposition had dropped off once workers became familiar with the idea.

The Viability of Short-Time Compensation. Unlike many work sharing proposals, short-time compensation is a well-defined and working employment policy. While evaluations of these programs are still in process,[109] there is ample data from both the German and California programs to both provide an empirical basis for a preliminary assessment of some of their impacts and illustrate issues pertinent to other work sharing policies.

Impact on Productivity and Price Stability: Early advocates of the STC concept within the United States commonly claimed that it would facilitate a fairer distribution of available worktime without extra costs to employers or the government. It was assumed that employers would be indifferent toward reducing their workweek and laying off a commensurate proportion of their work forces, and that there would be no difference in cost to the UI system between paying full benefits to some workers or partial benefits to all workers. Thus, it was reasoned, work sharing with the use of STC should not impede production or raise prices any more than comparable layoffs. While this assumption is perhaps more true than it is false, some care must be taken to qualify the likely effects of STC on productivity, job preservation, and other factors.

Ultimately, the economic costs to firms and government must be determined by an empirical evaluation of working programs that has not yet been completed. Nonetheless, data

on the costs of labor and social programs can be used to illustrate the likely economic impacts of using short-time compensation in comparison to layoffs. This can be accomplished by a hypothetical example developed to contrast laying off 20 percent of low seniority and low income employees with a 20 percent (1 day) worktime reduction with STC benefits within a fictitious firm employing 100 wage-earning workers. These workers have average 1980 U.S. pay levels and benefits under the income tax and UI benefit conditions existing in California. Further, the income and fringe benefits are distributed within this fictitious group of workers to roughly reflect prevailing conditions in the United States. Thus, the highest paid 20 percent receive a gross weekly wage of $380, the average worker a gross weekly income of $265, and the lowest 20 percent a gross weekly income of $155. The lowest paid 20 percent are assumed to have low seniority and be subject to layoffs when they occur. The economic impacts of STC and layoffs under these conditions are demonstrated in table 3-2.

The typical firm is likely to have lower labor and turnover costs under STC as opposed to layoffs, but other factors are likely to preempt these considerations in determining whether short-time compensation is a viable alternative to layoffs. Despite higher firm expenditures per hour of labor on fixed fringe benefit commitments, overall labor costs are likely to be lower under STC because reductions in worktime for all employees as opposed to total layoff of low paid junior workers will tend to reduce average wage rates. The average hourly wage and benefit costs computed in the hypothetical example was $9.81 under STC as opposed to $10.22 under regular layoffs and $9.26 under standard full-time conditions. Lower turnover costs resulting from avoidance of recall, new hiring, and training would likely lead to further savings by firms using STC as an alternative to layoffs. However, these savings are likely to be at least

partly counterbalanced by a slight increase of firm UI taxes as a result of higher partial UI payments given to senior workers with large base earnings. Generally, hourly labor costs can be expected to be higher under both STC and layoffs than they would be under full-time conditions, suggesting that firms would not wish to utilize STC unless confronted with economic problems.

As suggested previously, factors other than labor costs are likely to determine the viability of STC to firms. Most notably, the nature of firm technology and organization are likely to be a predominant consideration. In some cases, workweek adjustments can be made without undesirable subutilization of capital and reduced productivity. In other cases, rigid relationships between capital and labor may make workweek reductions technically impossible. Additionally, if experienced senior workers are significantly more productive than their junior counterparts, firms may be reluctant to retain low seniority workers by cutting back the worktime of senior employees.

Presumed benefits to workers and firms resulting from use of STC are likely to be gained through increased costs to the government. As previously noted, the level of average benefits under STC is likely to be higher than UI payments resulting from layoffs because benefits for senior workers will be greater than those collected by junior workers who earn less. However, such extra costs to the government are likely to be recouped over the long-run by increased UI taxes for participating firms. Additionally, use of STC can be expected to reduce general tax revenues received by the government. Since workers, particularly those with higher incomes, will pay proportionally less taxes with reduced earnings, total revenues from income based taxes will likely be lower. Specifically, the weekly state, federal and social security taxes collected from the average STC participant in the hypothetical example was $56.80 as opposed to $69.88 for

the average worker in the group experiencing layoffs. To some degree, these losses will be slightly offset by lower expenditures on public programs such as food stamps, social security, and medicare for work groups using STC as opposed to layoffs.[110] Finally, there may be some increased program administration costs resulting from the need to process more claims than would occur with layoffs.

In sum, it appears that the use of short-time compensation will not directly cause firms to reduce productivity or increase prices as compared to what might be expected under layoffs. Most of all, extra costs to the unemployment insurance system would ultimately be counterbalanced by higher UI taxes among participating firms, who would presumably accept such costs due to compensating benefits from use of STC. Previously noted reductions of aggregate income tax payments could contribute to inflation if they fostered deficit spending by the public sector. However, such inflationary impacts would likely be minor.

Job Creation and Preservation: While there are unanswered questions, the impacts of short-time compensation programs on job creation and the reduction of unemployment appear reasonably clear. However, it should be emphasized that STC programs are defensive strategies designed to preserve jobs under threat of layoff rather than create jobs for the unemployed. Thus, such programs can be expected to reduce unemployment by preventing layoffs rather than creating new jobs.

Although it is generally agreed that workweek reductions under STC transfer all or most of foregone worktime to those who would otherwise lose their jobs, important questions remain about whether replacement of lost worktime with preserved employment is as high as some maintain. First, some critics have suggested that the program will provide "windfall" benefits to workers who already experience

Table 3-2
Hypothetical Comparison of Costs and Benefits of Short-Time Compensation and Layoffs to Typical Firm, Workers and Government[1] (Typical firm with 100 production workers over 1 week)

Cost and income factors	Comparison of Alternative Methods of Reducing Worktime by 20 Percent													
	Layoffs of 20 percent of work force							Reduced workweek: 100 workers on 32-hour weeks						
	Retained workers				Laid off:									
	Average worker		Highest paid 20 percent of workers		lowest paid 20 percent of workers			Average worker		Highest paid 20 percent of workers		Lowest paid 20 percent of workers		
	Cost per week	Cost per hour	Cost per week	Cost per hour	Cost per week	Total cost	Total cost for 100 workers	Cost per week	Cost per hour	Cost per week	Cost per hour	Cost per week	Cost per hour	Total cost for 100 workers
Impact on workers:														
Income and benefits														
Total gross wage, unemployment insurance, and benefits	$349.80	$8.75	$501.60	$12.54	$74.00	$1,480.00	$32,500.00	$318.20	$9.94	$449.60	$14.05	$188.40	$5.88	$31,852.00
Total net wage, unemployment insurance and benefits	302.36	7.56	416.54	10.41	74.00	1,480.00	27,952.40	285.33	8.92	390.04	12.19	177.76	5.56	28,476.60
Total net wage and unemployment insurance	217.56	5.44	294.94	7.37	74.00	1,480.00	20,432.40	200.53	6.27	260.48	8.19	128.16	4.01	19,964.60
Wages														
Gross wages[2]	265.00	6.63	380.00	9.50	...	.....	24,980.00	212.00	6.63	304.00	9.50	124.00	3.88	21,280.00
Net wages (after taxes)[3]	217.56	5.44	294.94	7.37	...	.....	18,922.40	179.11	5.60	244.48	7.64	113.36	3.54	17,904.60
Total fringe benefits[4]	94.80	2.12	121.60	3.04	...	.....	7,520.00	84.80	2.65	121.60	3.80	49.60	1.55	8,511.00
Unemployment insurance[5]	....	...	....	....	74.00	1,480.00	.....	21.40	...	24.00	...	14.80	...	2,060.00
Impact on firms:														
Total labor costs	368.96	9.22	527.81	13.20	...	.....	32,693.80	312.73	9.77	447.19	13.97	184.15	5.75	31,390.60
Total gross wages	265.00	6.63	380.00	9.50	...	.....	23,500.00	212.00	6.63	304.00	9.50	124.00	3.88	21,280.00
Total fringe benefits[4]	84.80	2.12	121.60	3.04	...	.....	7,520.00	84.80	2.65	121.60	3.80	49.60	1.55	8,511.00
Payroll taxes														
Unemployment insurance (year's average rate)[6]	2.92	.07	2.92	.07	...	.....	233.60	2.93	.09	2.96	.09	2.95	.09	293.80
Social security[7]	16.24	.41	23.29	.58	...	.....	1,440.20	13.00	.41	15.64	.58	7.60	.24	1,304.80
Turnover costs[8]	....	...	....	....	+	+	+	....	...	....	...	....	...	.....

Impact on unemployment insurance:														
Unemployment insurance system														
Benefit payments[1]	....	...	....	....	74.00	$1,480.00	1,480.00	21.40	...	24.00	...	14.80	...	2,060.00
Tax revenues[6]	2.92+	...	2.92	....	...	.....	233.60	2.93	...	2.95	...	2.95	...	293.80
Other government programs														
Program expenditures[7]	....	...	....	....	+	+	+	....	...	....	...	....	...	.....
Social security tax revenues[3]	16.24	...	23.29	....	...	.....	1,440.20	13.00	...	18.64	...	7.60	...	1,304.80
Income tax revenues[3]	47.44	...	85.06	....	...	.....	4,547.60	32.87	...	59.52	...	10.64	...	3,375.40

1. The assumptions underlying the table are (1) 40-hour workweek with no overtime, (2) all employees eligible for unemployment insurance, (3) lowest paid 20 percent of workers are also lowest seniority and subject to layoffs, (4) distribution and levels of wages and benefits approximate late 1979 conditions for nonsalaried U.S. production workers, and (5) taxes and unemployment insurance benefits based on California conditions.

2. Gross average weekly wage approximated from August 1979 average U.S. manufacturing workers' weekly income (*Monthly Labor Review,* October 1979, p. 98), and typical distribution of earnings within a work group of 100 employees into highest 20 percent and lowest 20 percent approximated from national income distribution patterns for male wage earners in manufacturing industries. (*Current Population Reports, Consumer Income,* Series P 60, No. 118, March 1979, pp. 228-29).

3. Dollar amount of taxes deducted from gross weekly earnings to determine net earnings based on Federal and California income tax withholding rates for a worker with three exemptions (California Employment Development Department, January 1979), and 1979 Social Security tax rates requiring payment of 6.13 percent of the first $22,900 of individual annual earnings by both employer and employee.

4. Dollar cost of fringe benefits such as medical care, private retirement pensions and paid time off computed as 32 percent of gross earnings based on available data (*Handbook of Labor Statistics 1977,* p. 237) and *Employment Benefits* (U.S. Chamber of Commerce, 1975).

5. Full weekly unemployment insurance benefits and 20 percent benefits based on California benefit determination formula in effect in January 1980. Full unemployment insurance benefits would be $74 a week for a fully unemployed worker earning $165 a week, $107 for a worker earning $265 a week, and $120 for a worker earning $380 a week or more. The California unemployment insurance benefit ceiling is $120 a week.

6. Unemployment insurance tax payments computed from estimated typical employer unemployment insurance tax based on average 1977 California tax rate of 2.46 percent (*Actuarial Report of the California Unemployment Fund,* 1977, pp. 28-29) adjusted upward 4 percent to account for employee turnover (*Employment and Training Report of the President,* 1979, p. 332) and prorated over one-year period to represent average unemployment tax expenditures by employer on first $6,000 of employee earnings for varied levels of continuously earned annual income.

7. Because of the unavailability of acceptable data showing dollar amounts of employer turnover costs resulting from hiring and training, and public program expenditures associated with varied levels and types of work losses, it was necessary to note expected impacts in terms of (+) for increased expenditures.

shortened workweeks as an alternative to layoffs, thus resulting in benefit expenditures without reduced incidence of job detachment.[111] Since the incidence of such workweek reduction appears to be low in the United States and commonly smaller than the 10 percent threshold reduction of worktime required before employees are eligible to receive benefits,[112] the extent of such a "windfall" effect would be limited. Second, and more important, it has been suggested that employers may find workweek reductions to be easier and less costly than layoffs, thus leading to the imposition of greater and possible longer worktime losses than would otherwise be the case with layoffs.[113]

This second possibility is an extremely complex issue which has not yet been subjected to satisfactory empirical assessment.[114] Despite general assessment by German officials that STC effectively prevents layoffs, available data leaves a number of ambiguities concerning its job saving effects. It has been noted that the aggregate worktime reductions measured for the work force have been significantly greater than the estimated reductions of full-time unemployment resulting from use of short-time compensation (see table 3-3). However, it is also noted that this difference comes primarily from a "silent reserve" (Stille Reserve) of employees on reduced worktime who do not or cannot claim short-time benefits.[115] This explanation is supported by early data from the California program,[116] and further underscored by the absence of complaints from participating workers and unions about excessive worktime reductions under STC. Nonetheless, the question of whether temporary workweek reductions under STC lead to greater losses of worktime than layoffs requires more elaborate empirical assessment.

Participation and Aggregate Impact on Employment: Available data indicate that short-time compensation is suitable for use by a large and diverse portion of the firms

Table 3-3
Estimated Impact of Short-time on Worktime and Unemployment, Germany, 1973-1977

Year	Registered short-time (000s)	Reduction of full time equivalent worktime (000s FTE)	Reduction of FTE unemployment due to short-time (000s FTE)	Registered unemployed (000s FTE)
1973	44	16	11	273
1974	293	106	70	582
1975	773	272	175	1,072
1976	277	90	60	1,060
1977	231	77	52	1,030
1978*	250	84	56	1,000

SOURCE: Mitteilungen aus der Arbeitsmarket-und Berufsforschung ("The Development of the Labor Market in the Federal Republic of Germany in 1977"), No. 1, 1977, p. 8. (Interpretation of data provided by Beatrice Reubens, Conservation of Human Resources, Columbia University, New York.) Data for 1977 and 1978 cited from Gunther Schmid, "Selective Employment Policy in West Germany: Some Evidence of Its Development and Impact," International Institute of Management, Berlin, Discussion Paper Series, July 1978, p. 14.

*1978 figures are provisional.

within industrial economies, and could therefore contribute significantly to the reduction of aggregate unemployment. Data from the German program provide insight concerning the potential level of participation in nations such as the United States. Ninety-five percent of all German workers receiving STC payments are found in manufacturing, mining and construction (see table 3-4). Within these sectors, the program is most widely used in the fabrication of metal products, ranging from the mining of iron and coal to the production of steel, machinery, automobiles and ships. Workers associated with electrical products, textiles and construction are the next most prominent participants.

Between one-third and one-half of all German workers receiving short-time payments were employed in large firms with more than 500 employees. However, enterprises with

Table 3-4
Short-Time Workers and Rate of Short-Time Work by Industry, Germany, 1973-1977

Industry	Number of workers on short-time per year					Percent of labor force on short-time					Average percent of labor force on short-time
	1973	1974	1975	1976	1977	1973[b]	1974[b]	1975[b]	1976	1977	1973-1975
Energy, mining	78[a]	29[a]	2,431[a]	30,325[a]	24,613[a]	0.02	0.01	0.49	6.07	5.03	2.33
Construction industry	316	8,513	31,027	11,334	8,684	0.02	0.52	1.90	0.69	0.55	0.74
Other industries	2,306	20,237	32,455	11,164	12,063	0.03	0.28	0.45	0.16	0.17	0.22
Manufacturing	41,010	263,624	707,421	224,185	185,969	0.49	3.13	8.39	2.66	2.19	3.37
Total	43,710	292,403	773,334	277,008	231,329	0.25	1.65	4.37	1.56	1.31	1.83

SOURCE: Gunther Schmid, "Selective Employment Policies in West Germany: Some Evidence of Its Development and Impact," Discussion Paper Series, International Institute of Management, Berlin, West Germany, July 1978, p. 34.

a. Excluding energy.

b. Based on dependent workers obliged to social insurance contributions.

more than 500 workers represented only 5.5 percent of the total number of firms using STC in 1978. Thus, although the average participating firm had only 63 employees, it appears that a very small but growing proportion of large employers provide a significant part of the individual STC beneficiaries.

Most observers have concluded that the program has significantly attenuated aggregate unemployment in Germany. One study has estimated that the use of STC reduced full-time unemployment by approximately 175,000 in 1975, and some 52,000 in 1977.[117] On the basis of these figures, full-time unemployment would have been one-sixth higher without use of short-time in 1975, and one-twentieth higher in 1977 (see table 3-3).

While the California STC program is still new and little used in comparison to regular layoffs with unemployment insurance, the patterns of participation to date suggest that American use of the program could evolve along the lines of that evidenced in Germany. Use of the California program grew slowly at first, with only 67 firms receiving certification during the seven months between July 1978 and February 1979. However, growth of participation has accelerated with the total number of certified firms increasing to 1,348 by the end of December 1980. It is commonly assumed that early lack of use and subsequent increases of participation can be largely attributed to a gradual growth of awareness about the program. Nonetheless, when one considers that there are over 500,000 firms and 10 million workers in California, it is apparent that the program has thus far had little statewide impact.

The latest tabular breakdowns available entail the 312 firms and 7,603 employees that had approved work sharing plans in California prior to September 1979. Some 33.3 percent of certified firms were manufacturing industries and

14.1 percent were wholesale and retail industries. Interestingly, firms using regular layoffs leading to UI claims were decisively skewed toward retail-wholesale and service industries (see table 3-5). Data on participating workers further underscores the applicability of this program to the manufacturing sector. Some 75.5 percent of the 3,165 workers who made claims for STC benefits were employed by firms in the manufacturing sector in comparison to 28.5 percent of the workers making regular UI claims (see table 3-6). This high proportion of manufacturing workers is caused by large firm size and an extremely high rate of actual program utilization within this sector.

In contrast to the German program, the size of firms participating in the California program have so far been small rather than large. Prior to October 1979, some 85 percent of participating firms had fewer than 40 benefit drawing employees and only 4 firms had over 200 employees (see table 3-5). However, applications made during summer 1980 have included firms with over 1,000 employees, indicating that exclusive use by small firms may not continue if participation in the program continues to expand.

It is noteworthy that the incidence of union affiliation has so far been higher among Work Sharing UI claimants than among workers claiming regular UI benefits. Specifically, 25.8 percent of the workers claiming Work Sharing UI up to September 1979 were unionized as compared to 16.5 percent of regular UI claimants. While the propensity of unionized employees to use the program requires a far more detailed assessment, it would appear that unionization has not deterred participation.

If STC programs similar to that of California were adopted by other states or developed as a national program, it is reasonable to expect that participation would increase gradually at an accelerating pace as the concept gains ex-

Table 3-5
Comparison of California Firms Using "Shared Work Unemployment Compensation" and Regular Layoffs

Firm characteristics	Firms using work sharing UI[1]		Firms using layoffs with UI[2]	
	Number	Percent	Number	Percent
Total	**312**	**100.0**	**435,417**	**100.0**
Industrial sector				
Agriculture	8	2.6	36,117	8.3
Mining and energy	1	.3	932	.2
Construction	8	2.6	42,356	9.7
Manufacturing	104	33.3	36,477	8.4
Transportation	24	7.7	13,219	3.0
Retail and wholesale	44	14.1	131,538	30.2
Finance, real estate	3	1.0	34,783	8.0
Services	38	12.2	137,589	31.6
Other	82	26.3	2,406	.6
Size of firm				
Under 50 workers	244	78.2	407,138	94.0
51-100 workers	39	12.5	14,727	3.1
101-200 workers	16	5.1	5,763	1.2
201-500 workers	10	3.2	5,646	1.2
501-1,000 workers	3	1.0	1,238	.3
Over 1,000 workers	0	--	905	.2
Portion of work force affected				
Under 20 percent	28	9.0	NA	NA
21-40 percent	37	11.9	NA	NA
41-60 percent	59	18.9	NA	NA
61-80 percent	58	18.6	NA	NA
81-100 percent	130	41.7	NA	NA
Unionization				
Unionized	34	10.9	NA	NA
Non-unionized	278	89.1	NA	NA
UI reserve account status				
Positive account	251	78.2	243,363	55.9
Negative account	45	14.0	76,085	17.5
Non-rated	25	7.8	109,704	25.2
No longer in business	--	--	6,265	1.4

1. California Employment Development Department, September 30, 1979.

2. *UI Claimant Characteristics Study,* July 1, 1976 and June 30, 1977, Employment Data and Research Division, California Employment Development Department, Sacramento, January 1979.

posure, and after a number of years, possibly approach a level of utilization comparable to that of Germany. Although such a level of participation is quite speculative, it would appear that the STC concept could be widely applied and significantly affect the level of aggregate full-time unemployment.

Social Equity and Targetability: In discussing the equity and targetability of short-time compensation, one must consider both firms and workers. In the case of firms, the major equity issue concerns the possibility that employers with "negative balance" UI accounts [118] might use the program excessively. This could lead to the subsidization of the UI and STC program costs incurred by firms with poor employment histories by firms with better records. While this is possible in Germany,[119] it is not likely in California. First, the regular UI tax system insures that firms with a high level of layoffs or workweek reductions are charged for the resulting use of UI funds by the government. Second, employers participating in Work Sharing UI whose recent history of unemployment insurance benefit charges exceed their contributions ("negative reserve employers") must pay additional unemployment insurance taxes ranging from .5 percent to 3.0 percent on the first $6,000 of all employee wages in succeeding calendar years.

Available data indicate that such special UI tax rates effectively discourage the use of the California program by economically marginal firms. Firms that have thus far utilized Work Sharing UI appear to have healthier UI tax account standings than those using layoffs leading to UI claims. Some 14.0 percent of the participating firms had a negative reserve account status (tax contributions to the UI system have been greater than withdrawals) in contrast to 17.5 percent of firms whose workers use regular UI.

The equity issues of STC concerning workers are more complex and subject to value judgments than those concern-

ing firms. While workers may vary in their views toward the program, available data clearly indicate that the STC concept effectively spreads the hardships of work lossage more thinly over a larger number of emplyees. Use of the German program has prevented major income loss among those who would have otherwise been laid off, while maintaining the incomes of other workers at levels reasonably close to that of full-time employment. Data show that some 90 percent of German recipients do not have their STC payments limited by the maximum UI benefit ceiling; and among this large subgroup of participants, take-home incomes are almost always maintained at 80 to 90 percent of regular full-time earnings,[120] depending on the extent of worktime reductions.

The previously cited analysis of the hypothetical costs and benefits of one-fifth workweek reductions with the California program (see table 3-2) indicates that it will generally produce economic gains for junior workers at the expense of those with seniority, minimize losses to all parties due to reduced income taxes and Work Sharing UI benefits, improve the aggregate economic well-being of the total work group, and provide more free time in the form of a four-day workweek. If the workweek is reduced from five to four days, high seniority workers in the top fifth earning level would take home a net weekly paycheck of around $268 or about 91 percent of the $295 they would receive under full-time conditions. Low seniority employees in the lowest earning levels would take home an average of $128 under Work Sharing UI (about 93 percent of net full-time earnings) in comparison to the $74 in UI benefits they would receive if totally laid off. The average worker would maintain about 92 percent of his or her regular weekly take-home earnings under short-time.

Under Work Sharing UI, all workers would maintain some degree of job attachment, as well as all or most of the

Table 3-6
Comparison of California Workers Experiencing "Shared Work Unemployment Compensation" and Layoffs with Regular Unemployment Insurance

Worker characteristics	Work sharers[1]		Laid off with UI[2]	
	Number	Percent	Number	Percent
Total	**3,165**	**100.0**	**5,687**	**100.0**
Sex				
Men	1,963	62.0	3,420	60.5
Women	1,171	37.0	2,237	39.5
Age				
Under 20 years	158	5.0	792	14.0
20-29 years	1,076	34.0	1,586	28.0
30-39 years	1,044	33.0	1,284	22.7
40-49 years	412	13.0	842	14.9
50-59 years	348	11.0	710	12.6
60 years and over	95	3.0	367	6.5
Unknown	32	1.0	76	1.3
Race				
White	1,614	51.0	3,305	58.4
Non-white	1,451	49.0	1,452	41.6
Normal weekly income				
$0-99	31	1.0	803	14.1
$100-199	1,646	52.0	2,430	42.8
$200-299	1,076	34.0	1,209	21.3
$300-399	317	10.0	546	9.6
$400-499	32	1.0	445	7.8
$500 and over	31	1.0	--	--
Unknown	32	1.0	248	4.4
Unionization				
Unionized	816	25.8	933	16.5
Non-unionized	2,349	74.2	4,281	75.7
Unknown	--	--	443	7.8
Weekly benefits received				
Under $25	NA	NA	--	--
$26-40	NA	NA	767	13.6
$41-60	NA	NA	1,191	20.1
$61-80	NA	NA	1,405	24.8
$81-$100	NA	NA	832	14.7
Over $100	NA	NA	1,462	26.8
Industrial sector				
Agriculture	4	.1	362	6.4
Mining and energy	10	.3	22	.4
Construction	19	.6	570	10.1

Manufacturing	2,389	75.5	1,611	28.5
Transportation	5	.2	272	4.8
Retail and wholesale	174	5.5	1,363	24.1
Finance, real estate	14	.4	226	4.0
Services	226	7.1	1,203	21.3
Unknown	324	10.0	28	.5

1. California Employment Development Department, September 30, 1979.

2. *UI Claimant Characteristics Study,* July 1, 1976 and June 30, 1977, Employment Data and Research Division, California Employment Development Department, Sacramento, January 1979.

fringe benefits which accompany employment. When the value of fringe benefits is added to net pay, the average employee would maintain 94.2 percent of total full-time "take-home" compensation as opposed to 92.5 percent under layoffs. Additionally, all workers experiencing reduced workweeks under the California program would have an additional day of free time and a higher effective per hour pay rate due to the partial UI income subsidy. Finally, since approximately one-fifth of UI applicants are judged to be ineligible due to inadequate base earnings, low seniority employees without eligibility would maintain at least partial wages as opposed to complete loss of income resulting from layoffs.

Breakdowns of Work Sharing UI claimant data by age, race and sex provide mixed indications of whether use of the program provides greater job security for low seniority and minority workers. The proportion of younger workers is lower among Work Sharing UI than regular UI claimants, indicating that junior workers are retained rather than laid off. Breakdowns by race and sex present puzzling results. If minorities and women are laid off before other employees, their proportions should be higher among regular UI claims than among those claiming work sharing benefits. Curiously, there is little difference by sex, and the proportion of minorities using the Work Sharing program is higher than the proportion using regular unemployment insurance.

These figures could indicate that Work Sharing UI is used among firms with a high incidence of minority and women workers, that many minorities and women are ineligible for UI, and therefore not counted as participants, that minorities are laid off prior to use of work sharing, or that there are inaccuracies in the available data.[121] More detailed analysis will be necessary to properly assess the affirmative action implications of the California program.

As suggested earlier, workers have varying opinions about the fairness or equity of using Work Sharing UI as an alternative to layoffs. To many, most particularly those vulnerable to layoffs, the STC concept can be expected to seem fairer than layoffs because it spreads the hardship of joblessness equally over many employees rather than placing it fully upon only a few persons. To others, principally those who are relatively invulnerable to layoffs, the seniority system might be viewed as the more equitable system for dealing with labor cutbacks. According to this second viewpoint, employees earn privileges and job security by the length of time they have been employed. Thus, young persons are expected to "pay their dues" by enduring job insecurity in early years so they need not worry about loss of work later in life. Clearly, one's view toward the equity of short-time compensation as opposed to layoffs will be largely determined by value judgments and personal interest in one of the two above philosophies of job security. Interestingly, national attitudinal data indicates that the STC concept is supported by both junior and senior workers (see table 3-7).[122]

Since use of STC is primarily a firm decision subject to union approval, it has been commonly assumed that firms will use the program in accord with specific organizational constraints and that targeting is unnecessary. Thus, with the exception of occasional discussion of possible subsidies to reimburse economically marginal firms for extra costs,[123] the

program has been proposed primarily to neutralize the existing bias of the UI system toward layoffs and simply provide workweek reductions as another alternative to layoffs.

Some persons have suggested that the STC program be "triggered" so that benefits are availably only during periods of high national or regional unemployment. Under such provisions, the program would essentially be targeted to periods of cyclic downturns and not available to firms and work groups in accord with specific economic problems.[124] To date, such a targeting restriction has not been given serious consideration.

Flexibility for Implementation and Termination: All indications suggest that the short-time compensation programs provide a high level of flexibility in terms of implementation and termination. Just as in the case of layoffs with UI, short-time programs can be used with varying degrees of worktime reductions for short and intermittent periods. Firms have a wide range of discretion in terms of week-to-week use of such programs. Thus, STC can be used when the need is present and ceased or reduced when economic conditions improve.

The diversity of usage patterns indicated by data from the German and California programs indicates that this program can be flexibly applied in accord with specific and changing economic conditions. The extent and duration of worktime reductions under the German STC program vary according to specific firm needs. The average German beneficiary had his or her worktime shortened by about 40 percent and the duration of use has been under three months. Between 1972 and 1977, some 92 percent of beneficiaries suffered a loss of worktime under 50 percent of standard hours, and 57 percent experienced a worktime loss of less than 25 percent. Between June 1977 and June 1978, 56 percent of participating workers received benefits for under three months and only 6

Table 3-7
Worker Preferences Toward the Use of Short-time Compensation as an Alternative to Layoffs by Selected Social Characteristics (percentage breakdown)

Social characteristics	Strongly favor	Favor somewhat	Neutral	Disfavor somewhat	Strongly disfavor	Correlation (Pearson r)	Number of respondents
Total	**36.1**	**27.6**	**17.7**	**8.0**	**10.6**	NA	**953**
Occupation						NA	
Prof-tech	33.9	27.2	16.7	8.9	13.3		180
Managerial	32.8	19.3	25.2	5.0	17.6		119
Clerical-sales	33.3	34.9	15.9	4.8	11.1		126
Skilled labor	42.9	24.6	18.8	5.4	8.3		240
Operatives-laborers	34.1	29.9	14.0	12.2	9.8		164
Service	34.7	29.6	18.4	13.3	4.1		98
Farm	30.8	38.5	15.4	0	15.4		13
Education						.0725	
Some high school or less	41.8	22.4	19.9	9.0	7.0	(s = .03)	201
High school degree	38.1	27.0	18.6	8.5	7.9		318
Some college	31.4	30.1	17.9	5.2	15.3		229
College degree	29.2	34.4	16.7	9.4	10.4		96
Some graduate school	36.3	27.5	10.8	8.8	16.7		102
Total family income						.1023	
Under $4,999	47.5	24.6	14.8	4.9	8.2	(s = .00)	61
$5,000-$9,999	34.5	22.8	23.4	11.0	8.3		145
$10,000-$14,999	41.0	31.3	16.9	4.1	6.7		195
$15,000-$19,999	33.5	30.4	20.9	7.9	7.3		191
$20,000-$24,999	36.8	25.6	12.0	10.5	15.0		133
$25,000-$34,999	43.0	23.4	15.0	8.4	10.3		107
Over $34,999	21.2	30.6	15.3	8.2	24.7		85

Union affiliation						NA	
Member	38.1	28.2	18.3	6.4	8.9		202
Non-member	35.5	27.5	17.7	8.3	11.1		739
Form of payment for work						NA	
Wage	38.5	29.1	15.4	9.8	7.2		447
Salary	32.8	28.7	19.7	6.7	12.2		345
Other	35.9	21.2	20.5	5.8	16.7		156
Hours worked weekly						.0957	
Under 34	42.9	29.3	13.1	6.1	8.6		198
35-39	32.4	30.4	23.5	9.8	3.9		102
40-44	35.3	27.8	16.7	9.6	10.6		436
Over 44	33.2	24.2	21.2	5.5	15.7		217
Major activity of spouse							
Men						NA	
Not married	37.2	26.3	19.0	5.8	11.7		137
Working full-time	32.5	26.1	15.3	15.9	10.2		157
Working part-time	26.1	30.4	20.3	13.0	10.1		69
Unemployed and off-job	44.1	23.5	17.6	11.6	2.9		34
Keeping house and other	37.7	22.9	19.5	7.1	14.8		210
Women						NA	
Not married	36.5	30.4	12.2	9.6	11.3		115
Working full-time	39.8	29.3	19.9	3.9	7.2		181
Working part-time	27.3	36.4	18.2	0	18.2		11
Unemployed and off-job	40.0	40.0	13.3	0	6.7		15
Keeping house and other	61.5	15.4	23.0	0	0		13
Sex						NA	
Men	34.6	26.1	18.3	9.5	11.6		613
Women	38.8	30.3	16.8	5.3	8.8		340

(continued)

arital status						NA	
Single	28.4	33.9	18.6	9.3	9.8		183
Married	36.3	26.4	18.7	7.7	10.9		659
Divorced-separated-widowed	47.2	24.5	11.3	6.6	10.4		106
umber of dependents						.0162	
None	36.1	27.9	17.4	8.7	10.0	(s = .62)	391
One	32.3	29.6	19.0	6.9	12.2		189
Two	41.4	25.7	16.2	8.4	8.4		191
Three	35.2	28.6	17.1	7.6	11.4		105
Four or more	33.8	23.0	21.6	6.8	14.9		74
ge of youngest child						.0277	
No children	36.5	28.6	15.8	8.7	10.4	(s = .40)	367
Under 5 years	35.2	27.0	20.4	7.7	9.7		196
5-9 years	37.0	26.8	17.3	8.7	10.2		127
10-14 years	34.7	28.8	19.5	7.6	9.3		118
Over 14 years	35.1	24.3	18.0	6.3	16.2		111
ge							
Under 25	29.4	35.9	19.4	6.5	8.8		170
25-34	34.6	27.7	20.4	8.1	9.2		260
35-49	37.0	24.3	17.3	7.7	13.7		284
50-64	40.6	25.0	14.7	9.8	9.8		224
Over 64	53.8	30.8	7.7	0	7.7		13
ace						NA	
White	36.2	26.8	17.6	7.7	11.6		816
Nonwhite	35.6	31.1	18.9	9.8	4.5		132

UESTION: Assume that it is necessary for your employer to lay off 2 out of every 10 workers for a temporary but unknown period. Assume so, that in order to prevent layoffs the government would give workers one-half of their pre-tax pay for each day they shorten their workweek. this way, you could get regular pay for working 32 hours, get half your pre-tax pay for the day you did not work, and no one would be laid f. How strongly would you favor or disfavor the use of such a plan in your own work place? (A) strongly favor, (B) favor somewhat,) neutral, (D) disfavor somewhat, (E) strongly disfavor.

percent received benefits for periods lasting longer than one year.[125]

Available German data clearly show that utilization of short-time compensation varies markedly with the business cycle. This appears to be particularly true for the early stages of an economic downturn, during which firms are not sure whether dismissals and long term layoffs are necessary. Such variations of STC utilization are dramatically demonstrated by the rapid upsurge during the beginning of the 1975 recession, followed by a decline in use despite the fact that unemployment levels did not fall appreciably (see table 3-8).[126]

There are indications that the German program has some rigidities not evident in the United States. Some analysts have observed that the rapid rise in the use of STC during 1975 was largely due to provisions of the labor and co-determination laws which protect workers against the loss of jobs by requiring advance notices of intent to lay off and consent of "worker councils" and labor courts. However, these provisions also recognize that economic considerations may necessitate individual and mass dismissals. The necessity for layoffs appears to have occurred during the 1974-1975 crisis as unemployment doubled each year (1973, 273,000; 1974, 582,000; and 1975, 1,074,000) until stabilizing at around one million workers for several years. The imminent danger of widespread bankruptcy ultimately nullified most of the obstacles to mass discharge. Thus, many firms laid off workers once the restraints of German labor law were relaxed.

The typical work and wage reduction utilized by participating firms in California is 20 percent. About two-thirds of those participating prior to October 1979 went from five-day weeks to four-day weeks. About 6 percent of participating employers chose a 10 percent worktime reduction,

Table 3-8
Annual Averages of Unemployment and Short-time Compensation Germany, 1968-1977

Year	Registered short-time (000s)	Registered unemployment (000s)	Unemployment rate (percent)
1968	10	.323	1.3
1969	1	179	.7
1970	10	149	.6
1971	86	185	.7
1972	76	246	.9
1973	44	273	1.0
1974	292	582	2.2
1975	773	1,074	4.7
1976	277	1,060	4.6
1977	231	1,030	4.5
1978*	250	1,000	-

SOURCE: Annual Report for 1976, Bundesantap Fur Arbeit, Republic of West Germany, pp. 8 and 65; and *Arbeits-und Sozialstatistik,* Federal Ministry of Labor and Social Affairs, Republic of West Germany, March 1978. Data for 1977 and 1978 cited from Gunther Schmid, "Selective Employment Policv in West Germany: Some Evidence of Its Development and Impact," Discussion Pape. Series, International Institute of Management, Berlin, July 1978, p. 14.

NOTE: Unemployment figures are based on the number of registrations at government Employment Service Offices. It is estimated that about 75 percent of the unemployed workers in West Germany register. Unemployment rates are computed on the basis of registered unemployment figures.

*1978 figures are provisional.

while 28 percent chose worktime reductions of 30 percent or over.

Many California employers have chosen to involve only a portion of their total work force in the Work Sharing UI program. The 312 employers using the program by the end of September 1979 employed 14,273 workers, but only 7,603 of these employees were included in the utilization plans. More specifically, only 41.7 percent of participating firms had over 80 percent of their total workforce using the program (see table 3-5). It is likely that the portion of

workforces not receiving benefits were salaried or white-collar employees who are not commonly subject to layoffs, or members of work units which continued to function at full level. On the other hand, the program may be used selectively such that low skilled and junior employees are laid off, with Work Sharing UI being used to retain highly skilled or senior workers; or Work Sharing UI may be used for low skilled and junior employees while keeping other workers full-time. This and related issues require closer examination.

Administrative and Regulatory Efficiency: While anecedotal reports suggest that existing short-time compensation programs have been administered effectively and efficiently,[127] there has not yet been a systematic assessment of administrative processes. Nonetheless, some observations have been made about specific issues such as determination of need for programs, worker influence in the decision to use the program, ease of filing claims by workers, and benefit payment procedures.

Informal assessments indicate that government administrators of short-time programs are somewhat "at the mercy" of firms in determining the eligibility of applicants.[128] The time constraints of program administrators coupled with the lack of specific technical knowledge leads many to admit that they must largely "trust" the good intentions of firms that apply for certification. One representative of a German firm described the technical advantage that most applicants have in this matter:

> As the experts of the local agencies are no economists, they cannot judge whether the conditions for the financing are fulfilled or not. They have to trust our explanation of the firm's economic situation. If we are clever, we can convince the 'experts.' Nobody can judge if the loss of hours worked is only bypassing or if it will be finished after a certain period.[129]

Given these circumstances, the major goal of program administrators is to monitor for obvious abuses and seek to weed out users that have little chance of recovery. As such, only 5 percent of applicants for German STC certification are denied and the vast majority of these are due to unlikely recovery.[130] Despite the apparent shortcomings of this certification procedure, there are few indications of program abuses.[131]

In the interest of encouraging employer participation in the California program and in an attempt to keep "bureaucratic red tape" to a minimum, administration of the program has been kept simple. Employers are only required to call or write for a two-page application form, provide basic information identifying employees, state that worktime reductions are economically necessary, and submit information on the amount of wage and hour reductions. If the application is approved, participating employers provide their participating employees with a weekly statement of reduced hours and wages which employees then use to claim Work Sharing UI benefits.

German labor law requires that employer decisions to reduce workweeks or lay off workers must be done with the agreement of Worker Councils established within most firms.[132] As such, the decision to participate is almost always a joint labor-management concurrence. Worker Council consent concerning the use of STC is binding upon the entire affected staff of an enterprise or department involved. Dissenting workers can only terminate employment to avoid a shorter workweek.[133] The German program appears to allow firms considerable discretion in determining what portions of their workforces go on short-time and how use of short-time is adjusted over time. Employers are allowed to transfer workers within the firm, and a moderate amount of discharges and new hiring is allowed as long as the overwhelming portion of employees maintain their jobs.[134]

Workers in Germany appear to be generally willing to let management take the initiative in deciding whether or not to use STC.[135]

The California program was designed to interfere as little as possible with existing labor-management relationships. Participation in the program is strictly voluntary for employers. However, the union bargaining agent must agree to the plan if participating employees are covered by a collective bargaining agreement. Where no such agreement exists, the employer is free to make the participation decision unilaterally. Experience to date suggests that the decision to participate is mutually agreeable to workers and firms.

Like German STC, the California program is intended to prevent layoffs. However, unlike its German counterpart, California employers are not required to "document" or prove that a reduction in hours cannot be avoided. Nor are employers prevented from laying off some workers before or after beginning use of the program. The question of fringe benefit continuation (health insurance, retirement, etc.) is not addressed in the California legislation and therefore is left to each employer. No restrictions are placed upon the employer's operation of his or her business, including discharges, transfers, and new hires. Additionally, the number of participants as well as the original wage and hour reduction assigned by the employer may be easily changed by means of written notification to the Employment Development Department. Restrictions on workers who participate are also kept to a minimum.

Once eligibility is determined for the German program, the Federal Labor Institute authorizes the payment of specified benefit amounts to workers. The firm pays these benefits directly to its employees, and is in turn reimbursed for these expenditures by the government. Short-time benefits are tax free.[136] However, these benefits are reduced

in the amount of 50 percent of all earnings taken in by recipients for work performed elsewhere in excess of the reduced work hours provided by the primary employer.[137]

In California, workers receive Work Sharing UI benefits directly from the state by mail. However, an initial claim must be filed personally by each worker at a local branch office of the Employment Development Department. Benefits are not taxable under California law but are taxable, to the same extent as regular UI benefits, under federal law. There are restrictions on outside or extra work. Workers who either "moonlight" or perform work in excess of the "reduced" hours originally assigned by their employers have 100 percent of such earnings deducted from their benefits.

Workers whose employers have stated that Work Sharing UI will be used as a temporary measure (defined as fewer than 10 weeks) are automatically exempted from the normal work search requirements that regular unemployment insurance recipients must adhere to. Employers who state that their expected downturn will last longer than 10 weeks but who believe that the downturn is nevertheless "temporary" in nature may also have employees exempted from the normal work search requirements simply by providing an explanation as to why they believe the downturn to be temporary. If, however, employers expecting a permanent workforce reduction use the program as a transition mechanism allowing employees to look for new jobs while working reduced work hours, those workers receiving benefits must adhere to the work search requirement of the regular UI system. During the first 15 months of the program's existence, only one employer with five workers has used STC in this fashion.

Of the 7,603 California workers approved to receive Work Sharing UI benefits by September 1979, only 3,165 actually filed claims. Preliminary indications are that many

employers who obtained certification because they expected to lay off or cut workweeks ultimately found use of the program to be unnecessary. Additionally, it appears that a notable portion of employees within participating firms have failed to submit their claims for Work Sharing UI benefits. The reason for and extent of failure to file claims are yet to be discerned. Since the claim procedure is no more complex than that required for regular UI, it is likely that many workers do not find the benefits to be worth the effort of filing.

Secondary Social Impacts: While short-time compensation programs appear to be one of the most promising approaches to sharing work, they would produce little in the way of secondary social benefits. It has been suggested that the concept might be used as part of a long term economic adjustment strategy by freeing workers for retraining activities.[138] However, little policy analysis has so far been directed to this possibility. While the increase of free time fostered by STC programs would doubtless have some social utility,[139] the short-term and unpredictable nature of such free-time gains will limit the benefits that can be expected. Finally, there is some possibility that the use of STC during macroeconomic downturns will bolster the consumer confidence of workers and thus have some impact as a countercyclical stabilizer.

While there are still many unanswered questions, available information suggests that the short-time compensation concept might be successfully applied within the United States. Certainly this program does not provide a comprehensive means of combating all types of unemployment. It can do little to help persons who are without work because they have just entered or re-entered the labor force. Nor is it likely to provide much assistance to those who have already been laid off for a period of time or voluntarily left their jobs. However, short-time compensation does have the potential

to prevent full-time joblessness among the three to five million American workers unemployed because of layoffs and who comprise about half of the unemployed population.[140]

Despite the potentials of short-time compensation, there are many reservations which must be dealt with prior to its widespread application in the United States. Many representatives of organized labor have expressed grave concern with, and sometimes outright opposition to, the concept. Foremost among the concerns expressed by union representatives has been the fear that use of STC would disrupt hard won seniority provisions and established union procedures. Particularly, it has been suggested that layoffs according to seniority are fair and that use of shorter workweeks as an alternative to layoffs would lead to wage losses among higher paid senior workers that would not be adequately replaced by short-time benefits. Additionally, there is concern that use of the program would stimulate work group conflicts leading to a reduction of union solidarity and bargaining power, present numerous administrative complications which would effectively prevent certain types of workers from receiving benefits, encourage firms to instigate greater aggregate worktime reductions than would be the case under layoffs, and reduce political pressures for policies creating full employment.[141]

Members of the business community have also expressed concern that the program would ultimately be imposed on firms, encourage unions to push for shorter workweeks, and subsidize economically marginal firms at the expense of healthy firms. While these reservations are not unanimously expressed by all sectors and levels of labor and business,[142] they do represent important issues that must be resolved prior to acceptance of short-time compensation as a major social policy.

(6) Welfare and Income Maintenance Programs

While very few persons have suggested a linkage between income maintenance programs and work sharing,[143] it is well documented that increases in the coverage and benefit amounts provided by these programs tend to foster withdrawal from work and labor force participation.[144] Consciously and unconsciously, industrial countries have developed and pursued income maintenance programs which allow and encourage less productive workers to withdraw from work in favor of more competitive workers.[145] These income maintenance programs effectively subsidize worktime reductions and have become powerful determinants of the ways employment is distributed, just as do retirement pensions and student aids.

The relationship between income maintenance programs and the distribution of work will be further explored in the final chapter. In the meantime, it suffices to say that both the economic and social costs of these programs have reached staggering proportions. In many cases, it is apparent that there are no humane alternatives. However, the impact of these programs on time-income trade-offs (primarily the decision to work or not to work) should be constantly examined in order to monitor their effects on the distribution of work.

Overview

With the exception of short-time compensation, most programs which subsidize the reduction of worktime tend to be extremely costly and frequently inefficient as a means of transforming worktime to employment for those who are jobless. However, many of these programs have been proposed and implemented for reasons other than the sharing of employment. While most of them may not be justified in

terms of work sharing alone, their effects on the distribution of work may provide notable but limited opportunities for combating unemployment.

LIMITATION OF WORKTIME

A large portion of current discussion about work sharing concerns proposals to legislatively mandate limits to the amount of time that persons may work. Foremost among these proposals under consideration are restrictions on overtime, reduction of governmentally sanctioned standard workweeks, mandatory vacations, forced retirement, and compulsory education. While many of these work limitation proposals have been combined with each other, as well as with other types of work sharing, each of these specific approaches will be discussed separately.

(7) Restriction of Overtime

The idea of transferring overtime hours into jobs for the unemployed has been applied in most industrial nations and still receives considerable attention as a potential employment policy.[146] To illustrate why many persons find this approach to be attractive, the total number of overtime hours for U.S. production workers was estimated to be about 2.4 billion in 1974. If this overtime could be transferred to persons seeking employment, about 1 million full-time jobs might be created.[147] While some proposals have sought to reduce overtime by mandatory limitation,[148] most proposals of ths sort seek to discourage overtime by requiring employers to pay higher rates to workers on overtime.[149] For example, it is now frequently proposed that overtime pay be increased from time-and-a-half to double-time within the United States in order to intensify disincentives to the use of overtime by employers.[150] The general assumption here is that such "overtime penalties" would be a flexible but per-

suasive means of encouraging employers to hire new workers rather than put existing personnel on overtime.

The idea of creating new jobs by limiting overtime has risen to the forefront of policy debates a number of times the last several decades. The first major policy implementation of the idea took form in the Fair Labor Standards Act (FLSA) of 1938. This law defined the standard workweek as 44 hours in 1938, 42 in 1940 and the current 40 hours by 1941. Hours worked by employees over this defined standard workweek were to be paid at time-and-a-half the regular pay rate.[151] In subsequent years, occasional wage controls and tax incentives fostered dramatic and ongoing growth of fixed labor costs in the form of fringe benefits (see table 2-2).[152] Thus, it has been claimed that such fixed costs of labor have increased the cost of new hiring and encouraged employers to use overtime rather than employing additional workers to obtain needed labor.[153] This point of view caused organized labor to renew its push for a higher overtime premium during the early 1960s.[154] This push culminated in an unsuccessful 1964 proposal from the Johnson Administration to amend the FLSA to impose a double-time pay premium for overtime in selected industries.[155] National discussion and legislative proposals of this sort have surfaced on a near annual basis since 1964.[156] Similarly, state legislation to outlaw mandatory overtime in California was barely defeated, but this proposal was primarily intended to prevent worktime abuses rather than create jobs.[157]

The effect of an increased overtime premium on economic productivity and prices is not clear. It is admitted by proponents and opponents alike that such a premium increase would not dissuade all overtime. In many cases, overtime is unavoidable because of unpredictable employee absences, machinery breakdowns and rush orders.[158] However, there is disagreement on how much overtime is unavoidable, with estimates ranging from 25 percent[159] to the largest portion of

overtime.[160] Whatever the figure, it can be assumed that an increased premium will lead to greater labor costs for those employees supplying unavoidable overtime work.[161] In the case of avoidable overtime, the impact of a higher premium on production and prices will depend on the extra costs resulting from new hiring as compared to use of more expensive overtime.

One informative assessment of the respective costs under the current time-and-a-half premium pay indicates that "it is much more expensive to meet an increase in labor demand by working overtime than by adding employees if no consideration is given to turnover costs" (turnover costs are the expenses of hiring and training).[162] However, turnover costs can be high. For example, it has been suggested by one source that the relative benefits of new hiring do not surpass the costs of overtime until a new worker has been employed for at least six months.[163] While such costs vary tremendously from firm to firm, it can only be speculated that the relative costs of new employment are generally only slightly less than commensurate overtime.

The issue of costs therefore appears to focus on the premium pay level that would be required to dissuade use of overtime and stimulate new hiring. Computations which will be reviewed shortly (table 3-9) indicate that a double-time-and-a-half premium would be necessary to foster significant reduction of overtime in favor of hiring, and that this would lead to a direct 8 percent increase in the average hourly costs of labor among employees working four hours overtime a week with premium pay, and much greater hourly labor costs among those working longer. If significant portions of existing overtime is not replaced by employment, or if the costs of new employment are only marginally less expensive than such overtime, this would likely lead to a slight increase in the average hourly costs of labor and some rise of prices.[164] Of course, such effects would be somewhat

Table 3-9
Percentage Change of Average Hourly Labor Costs from Alternative Overtime Pay Premiums (fringe benefits comprising 35 percent of standard weekly pay)

Overtime pay premium	Hours worked per week							
	40	41	42	43	44	46	48	52
Straight time								
Total weekly pay	$270	$275	$280	$285	$290	$300	$310	$330
Average hourly pay	$6.75	$6.71	$6.67	$6.63	$6.59	$6.52	$6.46	$6.35
Percent hourly pay change	0	-.06	-1.2	-1.8	-2.4	-3.4	-4.3	-6.0
Time-and-a-half								
Total weekly pay	$270	$278	$285	$293	$300	$315	$330	$360
Average hourly pay	$6.75	$6.77	$6.79	$6.80	$6.82	$6.85	$6.88	$6.92
Percent hourly pay change	0	.3	.6	.8	1.0	1.5	1.9	2.5
Double time								
Total weekly pay	$270	$280	$290	$300	$310	$330	$350	$390
Average hourly pay	$6.75	$6.83	$6.90	$6.98	$7.05	$7.17	$7.29	$7.50
Percent hourly pay change	0	1.2	2.2	3.4	4.4	6.2	8.0	11.1
Double time-and-a-half								
Total weekly pay	$270	$283	$295	$308	$320	$345	$370	$420
Average hourly pay	$6.75	$6.89	$7.02	$7.15	$7.27	$7.50	$7.71	$8.08
Percent hourly pay change	0	2.1	4.0	5.9	7.7	11.1	14.2	19.7
Triple time								
Total weekly pay	$270	$285	$300	$315	$330	$360	$390	$450
Average hourly pay	$6.75	$6.95	$7.14	$7.33	$7.50	$7.83	$8.13	$8.65
Percent hourly pay change	0	3.0	5.3	8.6	11.1	16.0	20.4	28.1

NOTE: Computations based on a $5.00 hourly gross pay rate with fixed fringe benefits with a dollar value equal to 35 percent of gross hourly wages for 40 hours of work per week. Thus, total average weekly pay and average hourly pay incorporates both wage and benefits. The percent change in average hourly pay due to overtime remains constant for all wage levels as long as percent expenditure on fringe benefits remains constant.

counterbalanced by the likelihood that newly hired workers would have lower pay levels than those already employed.

Whether or not a higher overtime premium would create new jobs is largely dependent on three factors. First, the extent of job creation would depend on the proportion of current overtime that is avoidable by new hiring. If large portions are unavoidable or of such short duration that new hiring is unjustified, few new jobs will be created. Second, new job creation would be affected by the costs of overtime relative to those of new hiring. Illustrative computations indicate that the current time-and-a-half premium has little impact as a deterrent of overtime, particularly during the first few hours of work over 40 hours (see table 3-9). Thus, as previously noted, a premium of double-and-a-half or triple-time would be necessary to significantly deter overtime. If the costs of new hiring are amply lower than such overtime, a significant degree of added employment could result. Third, if the costs of overtime and new hiring are high enough, employers might intensify investment in labor saving capital or simply curtail production and the use of labor.

Estimates on the extent of job creation that might be expected from a higher overtime premium vary greatly. One study estimated that a double-time premium would reduce overtime by 48 percent, increase the number of employed workers by 2 percent, and result in a net loss of 4 percent of previously existing aggregate worktime because time lost as overtime would be greater than that gained in the form of new jobs.[165] Another source has estimated that employment would be increased by 1.6 percent, but no assessment was made of the aggregate worktime gain or loss.[166]

Available data can be used to assess the potential impact of higher overtime premiums on aggregate employment and unemployment. This data indicate that the absolute maximum number of new jobs that could be created by an effec-

tive overtime premium would amount to no more than 1.8 million (for the 1978 labor force), and that the actual increase of jobs would be considerably lower. Long work hours and incidence of premium pay have remained relatively constant for the last several decades (see table 3-10).[167] Of the 69.5 million U.S. employees working full-time during May 1978, some 19 million (27.3 percent) worked over 40 hours (see table 3-11). Of these 19 million overtime workers, some 42.9 percent (8.1 million) received premium pay and were therefore vulnerable to the effects of a higher overtime pay rate.[168] Since available data show that average weekly overtime amounts to about nine hours a week,[169] there were about 73 million hours or a maximum of 1.8 million full-time jobs that could be gained from a transfer of overtime to new hiring. If it is reasonable to assume that only half of existing overtime is avoidable,[170] this leaves the likely level of new employment that might result from an effective overtime premium to about 900,000 jobs. Presumably, a large portion of such employment gains would occur in industrial sectors using production workers (see tables 3-10 and 3-12).[171]

The likelihood that higher overtime premiums would benefit and create jobs for selective occupational groups raises some questions about the equity of such an approach to work sharing. There would be little gain in overtime pay or job creation for most white-collar employees, most certainly those receiving salaries. Perhaps more important, there may be some questions about the fairness of major increases of the overtime premium for workers employed under circumstances where long hours are unavoidable and therefore not transferable to new employment.

Increasing the overtime premium is likely to prove to be somewhat inflexible in terms of implementation and termination. Because such an approach requires statutory action, it is not likely to be altered rapidly to meet changing

Table 3-10
Percent of Full-Time Wage and Salary Workers Who Worked Long Weeks and Percent of Those Working Long Weeks Who Received Premium Pay; by Industry Group, May 1973 - May 1978

	Worked 41 hours or more						Received premium pay					
Industry group	1973	1974	1975	1976	1977	1978	1973	1974	1975	1976	1977	1978
Total	29.1	27.6	25.0	25.8	27.4	27.3	42.5	41.6	36.2	39.7	42.4	42.9
Goods producing	30.0	27.7	23.4	26.6	28.6	28.0	63.9	60.5	53.7	60.4	62.0	61.1
Agriculture	54.6	54.7	55.9	56.8	53.1	47.4	7.9	10.4	11.6	13.4	10.9	14.0
Mining	38.4	41.7	36.6	34.1	34.5	40.9	65.8	64.8	57.5	57.4	64.5	65.6
Construction	23.0	21.8	20.9	21.4	23.9	22.3	56.6	53.1	52.2	52.6	55.9	56.1
Manufacturing	30.1	27.3	21.5	25.7	28.0	27.7	69.9	66.7	59.9	67.3	68.4	66.7
Service producing	28.5	27.4	26.0	25.4	26.6	26.9	27.3	28.9	26.9	26.6	29.6	31.3
Transportation and public utilities	27.1	26.2	23.3	24.1	26.2	28.7	53.6	53.2	48.4	44.1	51.1	49.8
Trade	39.3	37.1	35.9	35.7	36.6	35.8	27.5	30.0	28.3	28.5	31.0	32.0
Finance, insurance, & real estate	21.7	20.4	21.6	20.5	22.2	21.8	16.2	21.2	19.8	18.4	19.3	21.3
Service	26.2	25.9	24.0	22.7	23.7	24.3	18.8	19.9	18.8	19.0	22.0	24.0
Public administration	17.1	17.0	15.5	15.5	16.6	16.7	36.9	34.8	35.9	37.5	36.2	43.4
Federal[1]	15.0	13.5	11.4	13.4	14.8	15.2	58.1	57.3	53.1	58.8	53.0	58.7
State	15.8	14.7	14.3	11.4	11.1	12.1	24.0	16.5	11.2	17.9	18.9	31.0
Local	21.4	23.9	21.7	20.3	21.6	21.1	18.1	19.5	30.3	23.2	25.5	32.7

SOURCE: George D. Stamas, "Working a Long Week and Getting Premium Pay," *Monthly Labor Review,* May 1979, p. 4.
[1] Includes postal service.

Table 3-11
Incidence of Long Hours and Premium Pay, May 1978 (full-time work force)

Hours of work per week	Number of workers (000s)	Percent of full time work force	Number of workers with premium pay (000s)	Percent of full time work force with premium pay
35-40 hours	50,536	72.7	--	--
41-48 hours	8,935	12.9	4,896	7.0
49-59 hours	6,285	9.0	2,325	3.3
Over 60 hours	3,757	5.4	921	1.3
Number	69,513	--	8,142	--
Percent	--	100.0	--	12.7

SOURCE: Data excerpted from George D. Stamas, "Working a Long Week and Getting Premium Pay," *Monthly Labor Review*, May 1979, pp. 41-45.

Table 3-12
Estimated Maximum Employment Impact of Increased Overtime Premium on U.S. Production Workers

Year	Production workers (000s)	Overtime hours per worker	Equivalent workers (000s)	Percent increase
1956	13,436	146	978	7.3
1957	13,189	120	789	6.0
1958	11,997	104	624	5.2
1959	12,603	140	885	7.0
1960	12,586	125	785	6.2
1961	12,083	125	754	6.2
1962	12,488	146	909	7.3
1963	12,555	146	914	7.3
1964	12,781	161	1,030	8.1
1965	13,434	187	1,257	9.4
1966	14,297	203	1,450	10.1
1967	14,308	177	1,265	8.8
1968	14,514	187	1,357	9.4
1969	14,767	187	1,380	9.4
1970	14,020	156	1,094	7.8
1971	13,467	151	1,017	7.6
1972	13,957	182	1,270	9.1
1973	14,760	198	1,461	9.9
1974	14,613	166	1,213	8.3

SOURCE: Joyce M. Nussbaum and Donald E. Wise, "The Overtime Pay Premium and Employment" *Work Time and Employment,* Special Report No. 28, National Commission for Employment Policy, Washington, DC, 1979 (data originally cited from *Employment and Earnings, United States, 1909-75,* U.S. Department of Labor).

social conditions. In the same way that the current time-and-a-half premium has remained stable for over four decades despite its alleged impotence as a deterrent to overtime, a major increase of the premium could remain unchangeable despite the emergence of conditions that would make such a premium ineffective or inadvisable. At the same time, it must also be noted that the statutory overtime premium is not totally inflexible. One of the most attractive features of this approach is that it does not directly mandate shorter hours. While the overtime premium is somewhat inflexible, employers have the institutional flexibility to decide whether or not to use overtime under the premium pay requirements set by law.

There appear to be some limits to the efficient and effective administration of statutory overtime premiums. Early in the development of the current FLSA overtime statutes, it was recognized that it would be difficult, if not impossible, to impose overtime premiums in some industrial sectors.[172] The problems of enforcing these premiums proved to be particularly difficult among non-union workers and certain other sectors. As a result, the law has been applied, and is likely to be applied, selectively because of the difficulty of monitoring and enforcement in some sectors. Thus, we find that 64.7 percent of all workers receiving overtime premiums in 1978 were among the roughly 21 percent of the American labor force that are unionized, and only 42.9 percent of all employees working overtime in 1978 received premium pay (see table 3-10).[173]

The only major secondary social benefit that can be expected from an increased overtime premium is the possibility that it would discourage abuses and social ills related to prolonged hours of work. While there are certainly an ample number of workers who welcome and seek overtime,[174] there is also a notable incidence of human hardship resulting from mandatory impositions of long hours.[175] Even in cases where

workers willingly accept overtime, there have been reports of resulting lack of attention to personal and family matters that might be attenuated by an overall reduction of prolonged hours.

The impact of the premium pay approach to limiting overtime and creating jobs depends heavily on the extent of pay increases mandated over the standard workweek and avoidability of overtime to employers. These issues are clearly controversial. While the overall job creating and price inflating potentials of a higher overtime premium are speculative, this approach may have some value as a work sharing strategy.[176] Most particularly, harsh disincentives for overly prolonged hours, targeted and perhaps graduated premium pay requirements, expansion of the standard workweek time frame to months or years, and requirements that employees working overtime be given "compensatory time off" could enhance the viability of sharing employment via overtime limitation.[177] Further, neutralization of fixed labor cost barriers to new hiring,[178] which will be discussed in a later section, could increase the effectiveness of this approach. As an overview, Joseph Garbarino aptly summarized the likely results of this approach as, "a combination of more pay for those workers whose overtime is really unavoidable, a reduction of total overtime worked, and some increase in employment."[179]

(8) Reduction of the Standard Workweek

Mandatory premium overtime pay rates require the establishment of a standard workweek as a benchmark for the instigation of overtime. For example, the United States and many other nations have defined their standard workweek as 40 hours, thus requiring that employees working more than 40 hours during a given week should receive overtime pay. A leading work sharing policy, which is often combined with higher overtime pay, is reduction of the stan-

dard workweek. This would result in the overtime pay penalty going into effect sooner, creating an incentive for employers to cut the workweek and presumably hire additional workers.

The concept of reducing the standard workweek has been at once the most applied and the most controversial of work sharing policies. As noted earlier, this approach was not only proposed, but implemented in the form of the Fair Labor Standards Act of 1938. In most cases, the temporary work sharing undertaken by individual firms during the depression era prior to the passage of this act had already reduced the average workweek below the 40 hour standard established by this legislation (see table 1-1). Nonetheless, it is commonly agreed that limitation of the workweek deterred resumption of long hours in subsequent years. Ultimately, however, the growth of fixed labor costs such as health insurance and pension programs has led many observers to suggest that this approach may no longer be an effective deterrent to long workweeks.[180]

Perpetuation of high unemployment during the 1970s revitalized interest in this approach to work sharing and catalyzed the formation of an alliance of labor leaders to promote a phased reduction of the standard workweek from 40 to 35 hours.[181] In the United States, the forefront of this movement took the form of the All Unions Committee to Shorten the Workweek. This group held its first national convention during April 1978,[182] and has come to actively support federal legislation to implement its goal.[183]

The impact of this proposed reduction of the standard workweek on the costs of production would depend largely, but not solely, on whether workers would receive the same weekly pay for a reduced workweek as they would for the current workweek. If all workers earned the same pay level, the direct increase in the hourly cost of labor would be about

14 percent if the standard workweek was effectively shortened to 35 hours without a pay loss. Of course, workers' incomes do vary substantially, and new workers hired to replace lost worktime would commonly receive low, junior-level pay. One of the most recent studies indicate that a reduction of the standard workweek to 35 hours without a weekly pay loss would increase the hourly costs of labor between 6 and 8 percent.[184] While the most recent legislation submitted on this issue does not guarantee maintenance of weekly pay levels, labor leaders have tended to assure their members that weekly earnings would not be cut.[185] As such, there is some question about the extent to which a legislated workweek reduction would directly increase the hourly costs of labor.[186].

A mandatory limitation of the standard workweek would also be likely to increase production costs in a number of indirect ways. First and foremost, such a contraction of the workweek would tend to create a shortage of labor, growth in the competition for workers among employers, and a resultant bidding up of pay levels to attract needed employees.[187] In many cases, the skills of newly hired workers may be lower than existing occupational norms, leading in some measure to less output for higher labor costs.[188] Correspondingly, some organizations may sustain added costs due to technical difficulties confronted in adjusting to a universally mandated 35-hour workweek.[189] Additionally, the per hour costs of fixed fringe benefit expenditures would increase for all employees with reduced workweeks (see table 2-2). At the same time, advocates of the shorter standard workweek argue that the growth of aggregate consumer income brought about by increased employment would stimulate economic growth by expanding overall market demand.[190] While the issue of costs and impacts on productivity remains controversial, most analysts tend to agree that a mandatory reduction of the standard

workweek would significantly increase the costs of production and prove to be highly inflationary.[191]

While it is commonly agreed that a reduction of the standard workweek would redistribute existing worktime to create jobs, there is disagreement over the number of jobs that would be created and the permanence of such employment gains. Simplistic calculations indicate that the maximum number of full-time jobs that might be created would amount to 9.6 million for the 1978 labor force (full-time jobs being redefined as 35 hours a week).[192] However, more precise speculations indicate a new job yield that is substantially lower. Only 67.3 million of the 100.4 million persons employed in 1978 were working over 35 hours a week, and some 50.5 million of these had workweeks between 35 and 40 hours (see table 3-11). The ten million maximum job creation noted above was computed on the assumption that all of those working over 35 hours would forfeit five hours of their workweeks to create new positions, a figure that should realistically be cut drastically because the average person employed between 35 and 40 hours a week is likely to work significantly under 40 hours. Indeed, even the 8.7 million new jobs figure claimed by the All Unions Committee for the Shorter Workweek appears unduly high.[193]

The job yield from a 35-hour standard workweek would be even further limited by other factors. The impact of a lower statutory workweek on the length of actual workweeks would depend upon the effectiveness of the premium pay requirement as a deterrent to overtime. If, as many maintain, the current time-and-a-half premium is an adequate deterrent, the premium would have to be raised significantly before it would prevent workweeks over 35 hours to any notable degree.

Of more importance, the analysis of the previous section indicates that the existing universal overtime premium re-

quirement has been applied selectively. In short, less than half of those legally eligible for overtime pay received such compensation in 1978 (see tables 3-11 and 3-12), and most of those receiving premium pay were unionized and in the production trades.[194] For the most part, the overtime premium does not appear to be applied outside of the roughly 21 percent of the U.S. labor force that are members of unions. Thus, one can expect that failure to enforce the overtime premium and the willingness of many employers to sustain the costs of overtime wages to maintain desired work hours will drastically cut the job creating potentials of a shorter standard workweek.

Finally, firm tendencies to displace workers with capital and organizational efficiencies due to the higher costs of labor resulting from shorter workweeks,[195] coupled with the problems of finding new employees with the skills required to make up for worktime reductions among current employees,[196] is likely to create a situation where the number of new jobs created will not be equal to the worktime foregone due to a lower standard workweek.

All in all, estimation of the number of new jobs that might be created by this approach to work sharing is extremely speculative. However, one can be reasonably sure that the number would be substantially lower than half of the 8.7 million that some claim might be created.[197] Indeed, one relevant British study conducted in 1978 estimated that a reduction of the standard workweek from 40 to 35 hours would only create between .5 and 2 percent more jobs—roughly one-half to two million new jobs in terms of the 1978 U.S. labor force.[198]

The equity issues associated with reducing the standard workweek are similar to those previously discussed for the higher overtime premium. Briefly, available data indicate that actual enforcement of such a provision would likely be

limited to unionized workers and firms. Thus, the burden of higher production costs would likely be borne by select industries or consumers in general, while the economic gains and job yield would likewise be focused on limited categories of workers. Further, most analysts tend to believe that this approach to work sharing would be exceedingly inflationary,[199] and thus drastically complicate the economic problems of those persons seeking to maintain their standard of living on fixed incomes.

For the most part, the flexibility for implementing and terminating a shorter standard workweek would be low. While there have been some suggestions that the standard workweek be adjusted automatically in response to the level of unemployment,[200] workweek standards to date have proven to be extremely difficult to change. Thus, it is likely that such an approach would not be easily adjusted in response to changing social and economic conditions.

As already noted, the successful enforcement of the standard workweek and overtime premium has been limited. Aside from employees who are unionized or within work environments constantly under government surveillance, the experience to date has been that workweek restrictions are near impossible to enforce, and that a serious effort to apply such work limitations would require a large and costly regulatory apparatus.

The secondary social benefits that might be derived from a successfully implemented shorter workweek would be moderate. Added free time would certainly enhance the quality of life,[201] although most data show that contemporary workers prefer other types of free time, such as vacations.[202] Of course, the way in which a shorter workweek is scheduled will determine the utility of added free time to individuals. For example, parents in dual-earner families might place great value on shorter workdays while others

might prefer fewer but longer workdays during each week. For some lines of work, the shorter week would reduce fatigue and presumably job related injuries.

All in all, proposals for sharing employment by amending the Fair Labor Standards Act to reduce the standard workweek are among the least attractive of existing work sharing options. Most persons who have studied this approach have concluded that it would likely reduce productivity, foster higher prices for the consumer, and possibly even decrease aggregate employment over the long-run due to intensified capitalization of the production process brought about by higher labor costs.[203] Of course, it should be noted that some compromise between total loss of pay and no pay loss for workweek reductions could alter the negative impacts associated with this proposal within economic sectors where a lower standard workweek could be enforced.

(9) Mandatory Vacations

Many European nations have legislated mandatory minimum vacations. For example, by the mid-1970s Belgium, Denmark, Finland and France had statutes which set a minimum of three weeks vacation for all workers.[204] Sweden insures even more in the way of vacation rights. In 1980, all workers were guaranteed five weeks of paid vacation by law. It has occasionally been suggested that such mandated vacations might reduce the size of the labor force and thus alleviate unemployment.[205]

In many ways, the pros and cons of using mandatory vacations as a work sharing approach are similar to those reviewed in this volume's prior sections on the sabbatical leave. Whether or not mandatory vacation laws would guarantee continuity of pay during absence from work is not always stated in proposals. If pay was maintained during vacations

by the government or employers, the result would likely be inflationary, although such inflationary impacts would probably vary in relation to the length of vacations. Specifically, each added week of paid vacation would be expected to increase the costs of labor by about 2 percent. Further, it has been suggested that vacations would have to be extremely long or evenly distributed among employees over the work year before most employers would hire new workers to make up for labor lost as a result of annual leaves.[206]. Nonetheless, extended vacations such as those guaranteed in Sweden could have employment impacts that merit further investigation.

(10) Forced Retirement

Over the last several decades, many organizations have instigated policies which make retirement mandatory or almost mandatory at a preset age. In the United States, for example, evidence suggests that about 45 percent of employers providing private pension plans had such provisions in 1974.[207] Such forced retirement has been initiated in large part to allow employers to replace highly paid senior employees with lower paid and possibly better trained junior workers,[208] provide management with a palatable mechanism for terminating less productive older workers,[209] and insure advancement opportunities for younger employees.[210] These retirement regulations certainly influence the distribution of work among age groups and have, therefore, been viewed as a potential work sharing device.[211]

Without belaboring the point, it is sufficient to suggest that the progressive lowering of compulsory retirement age has resulted in growing resistance to mandatory termination on the basis of age.[212] As an indication of this resistance, two nationally representative surveys conducted in 1974 and 1977 found that 86 percent agreed that "nobody should be forced to retire because of age if he wants to continue working and

is still able to do the job."[213] As a result of this consensus, national and state laws have been passed making forced retirement illegal. Thus, it would appear that forced retirement, whether publicly or privately instigated, is now infeasible and is likely to become an increasingly improbable option for sharing work.

(11) Compulsory Education

The United States and other nations have statutes requiring young persons to remain in school up to a specified age. Most of these statutes have been enacted to guarantee custodial guidance and a minimum level of educational attainment for all children and youth.[214] As a result, the minimum ages for leaving school are relatively low, generally set at 15 or 16 years.[215] Such compulsory education laws have work sharing implications in that they attenuate competition for employment by delaying the labor force entry of young persons. However, existing minimum schooling requirements are commonly well below the age at which the vast majority of young persons complete their formal educations, and it is generally conceded that enforcement of significantly increased minimum schooling would be almost impossible.[216] As such, work limitation via compulsory schooling appears to be an inadvisable approach to redistributing employment. In fact, more has been said about lowering working age limits to allow opportunity for work experiences as an alternative to schooling for some young persons.

Overview

In overview, programs to spread employment among a larger number of persons by imposing limitations on the workweek, workyear or worklife appear to be costly, unenforceable and generally unacceptable in terms of constraining individual freedom. Increased overtime restriction may

have some potential for redistributing work, but problems would have to be overcome to insure the avoidance of undue cost and inflexibility. Mandatory reduction of the standard workweek would be highly inflationary if not accompanied by a commensurate or partial pay reduction, and politically infeasible with significant pay reductions. Expanded vacations could be costly and would be unlikely to create new jobs unless vacations were greatly prolonged or intricately scheduled. Finally, compulsory retirement and schooling laws would be extremely unpopular, occasionally illegal, and probably impossible to enforce.

LONG TERM TIME-INCOME TRADE-OFFS

It has been proposed that worktime be reduced gradually over the course of several years by forfeiting portions of pay raises made possible by economic growth or promotions in exchange for more free time. If potential macroeconomic output were to be maintained, the resulting decline of worktime would make it necessary for employers to hire more workers in order to maintain potential economic output. Organized labor has been a major advocate of this approach, proposing that worktime reductions primarily taking the form of shorter workweeks be accomplished through the collective bargaining process with the possible assistance of incentives from the government.[217]

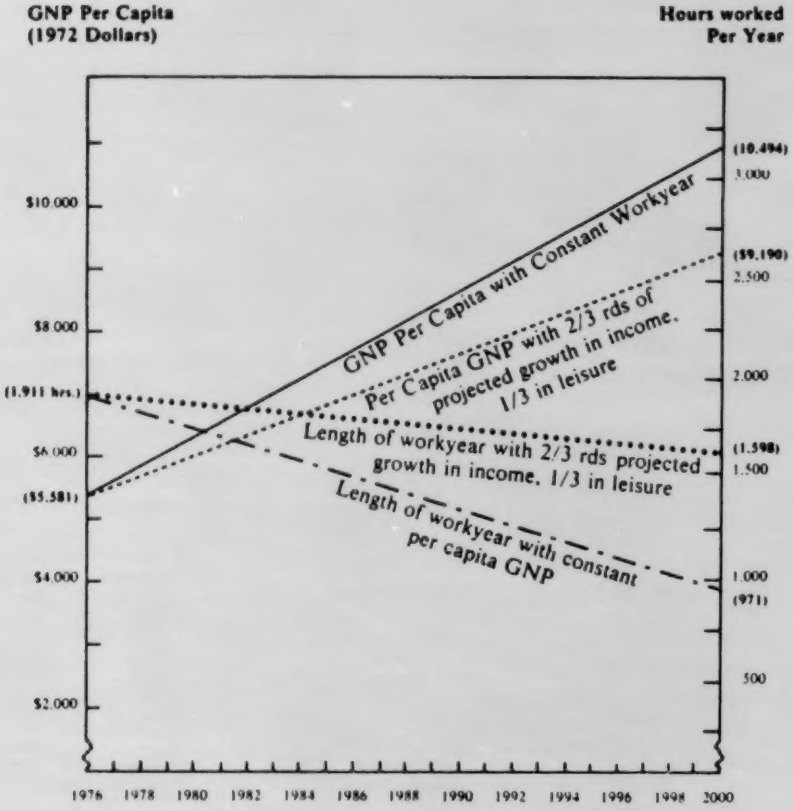
A recent updating of earlier computations by Juanita Kreps and Joseph Spengler in 1966 indicate that rather remarkable increases of free time could be gained by foregoing a portion of moderate projections of economic growth.[218] Working from projections of "slow" economic growth prepared by the U.S. Bureau of Labor Statistics, an updating of these earlier computations show how much free time the average American worker might expect to gain by the year 2000 if one-third of predicted real economic growth

were to be exchanged for more leisure. As figure 3 demonstrates, the number of hours worked per year by the average worker would decline from 1,911 in 1976 to 1,598 in the year 2000. If individuals could have their choice of the form this increased leisure might take, the average worker could have a 33-hour workweek, or an 11-week paid vacation each year, or a 13-month paid sabbatical leave every seven years, or retirement at the age of 56, or some combination of the above options (see table 3-13 for computations).[219]

Previously cited responses from a 1978 nationally representative survey of American workers indicates that there may be widespread support for such a gradual approach to reducing worktime and sharing employment (see table 2-3).[220] As already noted, the average American worker stated a desire to trade almost two-thirds of a 10 percent pay raise for five alternative forms of free time. If workers were willing to make the kind of time-income exchanges indicated by this survey three times over the next twelve years, the total number of hours worked each year by the average employee would decline from about 1,900 in 1978 to about 1,500 in 1990.[221] The first of these four-year trade-offs would result in a reduction of the average worker's annual worktime by approximately 130 hours. For a labor force of 100 million, this would amount to an aggregate forfeiture of about 12.6 billion work hours or 6.2 million full-time work years.[222] Assuming that potential aggregate economic output is maintained, some portion of this foregone worktime would become jobs for those who are unemployed.

These computations suggest tremendous potential for long term worktime reductions that could significantly attenuate unemployment. They also raise the questions of how social policies might encourage such long term time-income exchanges, and whether an acceptable portion of the worktime foregone in this fashion would be transformed into new

Figure 3
Alternative Uses of Economic Growth in GNP Per Capita and Hours Worked, 1976-2000 (Based on extrapolations of BLS "slower recovery" economic projections)



SOURCE: Computed on the basis of economic growth, labor force, and total population projections cited from Charles Bowman and Terry Morlan, "Revised Projections of the U.S. Economy to 1980 and 1985," *Monthly Labor Review,* March 1976; Howard Fullerton, "Revised Projections of the Labor Force to 1990," *Monthly Labor Review,* December 1976; and *Statistical Abstracts of the United States 1976,* Series E Projections, p. 394.

Table 3-13
Projected Growth of Productivity and Possible Use of Potential Free Time, 1975-2000
(Bureau of Labor Statistics "slower recovery" projections and extrapolations to 2000, 1972 dollars)

	Computation of potential free time				Possible uses of potential free time							
					All GNP growth to free time				One-third GNP growth to free time			
Year	Actual & projected adjusted GNP (billions)	Actual & projected total U.S. population (millions)	Actual & projected GNP per capita	Potential hours per year released from work per worker	Work-week (hours)	Vacation (weeks)	Sab-batical (months)	Retire-ment (years)	Work week (hours)	Vacation (weeks)	Sab-batical (months)	Retire-ment (years)
1975	$1,191.7	213,540	$ 5,581	--	39.0	3.0	--	65.0	39.0	3.0	--	65.0
1980	1,557.8	222,769	6,993	385.0	31.1	13.9	17.6	53.3	36.4	6.4	5.5	61.3
1985	1,865.5	234,068	7,970	572.4	27.3	17.8	23.7	49.2	35.1	7.9	7.9	59.7
1990	2,210.9	245,075	9,021	728.5	24.1	21.7	30.2	44.9	34.0	9.2	10.0	58.3
1995	2,547.1	253,784*	10,036	837.0	21.9	24.5	34.8	41.8	33.3	10.2	11.6	57.3
2000	2,885.8	262,494	10,994	940.5	19.8	27.1	39.0	39.0	32.6	11.0	12.9	56.4

*Interpolation.

SOURCES: Actual and projected adjusted GNP: GNP for 1975 from *Statistical Abstract of the United States, 1976,* p. 394. Projections for 1980 and 1985 from "slower recovery" computations by Charles Bowman and Terry Morlan, "Revised Projections of the U.S. Economy to 1980 and 1985. *Monthly Labor Review,* March 1976; and 1990, 1995 and 2000 projections computed by extrapolation of a linear regression based on data and projections from 1965 to 1985. GNP figures adjusted to compensate for .25 percent potential GNP exchanged for free time in BLS projections. Actual and projected GNP per capita is the dollar value of average adjusted GNP per person in U.S. population. Potential hours per year released from work per worker is the number of hours per year per worker that could be subtracted from 1975 annual work hours if 1975 per capita GNP were held constant and potential per capita economic growth is exchanged for free time.

NOTES:

Workweek: The average hours of work per week for the average worker.

Vacation: Total vacation time per year per worker. Potential increased vacation time is added to an estimated 1975 average vacation time of three weeks.

Sabbatical: The amount of extended free time possible every seven years if all potential free time gains are allocated to a sabbatical. 1975 annual vacation time is maintained.

Retirement: Average retirement age for worker aged 21 who allocates all potential free time toward earlier retirement. A 10 percent increase was made over other forms of free time for interest returns on deferred income.

employment opportunities. Assuming that mandatory trade-offs of this sort are undesirable, it would be necessary to stimulate collective bargaining and other employee-employer negotiation processes toward more emphasis on increasing free time. While little has been accomplished in the way of developing social policies for this purpose, four approaches which could stimulate the exchange of potential income for worktime reductions include neutralization of tax incentives for selected fringe benefits, public subsidization of fringe benefits, tax incentives for worktime reductions, and encouragement of flexible benefit options.

(12) Neutralization of Tax Incentives for Selected Fringe Benefits

Tax systems within the United States and other nations allow lower taxation or waiver of taxation for selected fringe benefits.[223] For example, the dollar value of private health insurance in the United States is essentially tax free, while wages and salaries are taxed.[224] Thus, there has been greater value to workers for certain types of compensation as opposed to other types. As a result, organized labor and other employee interest groups have placed heavy emphasis upon increasing tax free benefits as opposed to other bargaining goals, such as added free time.[225]

Social policies to neutralize existing differential taxation for various forms of compensation might encourage greater emphasis on exchanging potential pay raises for free time in two ways.[226] First, such changes would remove disincentives to provide forms of compensation other than time off. Second, neutralization of taxes would attenuate the multi-decade trend toward providing increasing portions of worker compensation in the form of fringe benefits,[227] which add to the fixed costs of labor and therefore create disincentives for worktime reductions of all types (see table 2-2).

The worktime and employment impacts of neutralizing taxes imposed on worker compensation requires detailed analysis which is not possible at this time. However, it is unlikely that neutralized compensation taxes would have an overwhelming impact on the exchange of potential income for time. Nonetheless, such changes in the tax system would remove current disincentives now deterring discussion and negotiation for worktime reductions.

(13) Public Subsidization of Fringe Benefits

Since the fixed costs of labor, most notably nonwork hour related benefits such as health care and life insurance, are significant barriers to worktime reductions, it can be expected that relief of these costs to employers would reduce the disincentives to work sharing.[228] Such subsidization could take the form of direct reimbursement to firms or social programs such as a national health care system. Subsidization of selected fringe benefits would make it easier for employers to reduce worktime, lessen the cost of hiring new workers, and generate potential slack to negotiate for free time in lieu of displaced benefit expenditures.

Unless government subsidization of fringe benefits was funded by added taxes in one form or another, it is likely that the costs would be highly inflationary. However, if such subsidization was based on taxes levied on individuals in accord with earnings in amounts no greater than the cost of existing private benefits, and the costs saved by employers by the substitution of private benefits was refunded to workers in such a way as to nullify losses from increased individual taxes, the costs to workers and inflationary effects would remain stable. However, expenditures on certain fringe benefits need no longer constitute a fixed cost barrier to firms otherwise willing to initiate worktime reductions. While the complexities of developing an efficient and

equitable system for such rechanneling of fringe benefit costs would be awesome, such reinstitutionalization of selected benefits could remove powerful disincentives to worktime reductions and the redistribution of employment.

(14) Tax Incentives for Worktime Reductions

While progressive tax systems doubtless provide some disincentives for long hours, it is unlikely that any general tax system provides an effective means of reducing worktime and sharing employment.[229] However, it is possible that realignment of specific tax provisions to make paid time-off the-job tax free in the same way as other fringe benefits could prove to be a powerful tool in stimulating collective bargaining and other employee-employer negotiations to place much higher emphasis on worktime reductions. This idea is based on the notion that "paid leisure" such as vacations and holidays[230] is economically the same as worktime reductions with no pay loss,[231] and that the later could be computed for tax purposes as paid leisure. If all equivalents of "paid time off the job," whether it be shorter workdays, vacations or sabbaticals, were made tax free in the same way as the cash value of other selected fringe benefits, workers would receive a kind of "bonus" for paid free time taken in lieu of pay raises resulting from promotion or economic growth. At the same time, such worktime reductions would cost employers no more than current paid leisure. Clearly, such realignment of tax policy would provide tremendous incentives for both employers and employees to reduce worktime. Employers could offer workers more value for the cash value of compensation paid, and employees and organized labor would receive more value for benefits negotiated.

The costs of stimulating worktime reductions by differential taxation of "paid leisure" could be surprisingly low. To

illustrate the cost, if preferential tax rates for paid leisure were to cause 100 full-time workers earning $20,000 a year with an income tax of 20 percent to choose to forego all of a 10 percent pay raise for a 10 percent reduction of annual worktime, the aggregate worktime reduction would equal ten full-time jobs, and the taxes directly forfeited by the government for each of the 100 employees would amount to $400. The tax revenues forfeited by the government for all 100 workers would be $40,000; but there would be a resulting potential for fully employing up to ten job seekers at a public cost of $4,000 a position. Further, since any increase of hiring to replace labor lost due to worktime reductions will increase the number of tax-paying workers, the revenues lost to the government would ultimately depend on the replacement rate of new jobs for forfeited worktime. In some cases, the loss of public revenues could be negligible.

It should be noted, however, that employers would have significant increases in fixed labor costs due to the need to provide fringe benefits for a larger number of employees. This could lead to inflationary price increases or government subsidies, or perhaps some prorating to allow employers and employees to share extra costs. Most probably, a large portion of employers would not hire new workers to replace all worktime reductions, but would make up some of the lost labor input with productivity increases.[232] Conceivably, new firm efficiencies could balance and even overcompensate increased fixed labor costs.

The job creating and preserving impact of preferential taxes for "paid leisure" is a matter of speculation. Significant forfeitures of potential income for free time would certainly give rise to some new demand for labor. However, the gradual way which worktime would be reduced with this approach could facilitate organizational adjustments which minimize the need for new hiring. Additionally, job creation potential would also vary greatly in accord with amounts and

types of free time gained by workers. Minor reductions of the workday or small increases in vacation time may not lead to new hiring.[233] Correspondingly, sabbatical leaves, significantly shorter workweeks, and greatly prolonged vacations could open jobs for the unemployed. It is also noteworthy that gradual time-income trade-offs over many years could be an effective way of preserving jobs within declining or realigning industries.[234] Finally, there is a possibility (which will be discussed in the next section) that government incentives could encourage employers to replace large portions of foregone worktime with new employees.

If the proper mix of incentives and options were actualized, it is likely that a large number of workers would choose to forego potential pay raises for more free time.[235] However, it should be emphasized that willingness to trade income for time is strongly influenced by the forms of prospective free time.[236] Thus, options to gain relatively unpopular forms of time may not elicit widespread worker or union support. Nonetheless, the total reductions of worktime that may be possible through several rounds of exchanging some portion of potential pay raises for free time could be substantial, and the prospect that some of this foregone work would create jobs opens the possibility of greatly reducing unemployment.

Redistributing work by providing tax incentives supportive of long term time-income trade-offs would, if anything, appear to result in increased social equity. Presumably, only the more affluent groups of workers would respond to these incentives and embark upon a path of exchanging economic growth for time. It might be suggested that this would amount to "leisure subsidies for the rich." However, it might also be suggested that resulting worktime reduction would create more and better jobs for the poor and unemployed, thus providing the earnings, status and self-sufficiency that are the cornerstones of social equity. Fur-

ther, special government subsidies might be applied to target jobs resulting from work reductions to those in greatest need of employment.

For the most part, worktime reductions encouraged by preferential taxation would be relatively inflexible. Such worktime reductions would occur slowly over a number of years, and would not likely be reversed easily within a short period of time. However, it may be possible to use such policies to lower and raise worktime over medium range periods of four to five years.

The administration and regulation of preferential taxation for paid leisure could be accomplished in much the same way as current tax laws affect selected fringe benefits. One major area of difficulty may concern the issue of whether existing or only new gains in paid leisure should receive preferential tax treatment. On one side, the application of preferential taxes to existing paid leisure could be viewed as a "windfall" benefit for worktime reductions that have already occurred. On the other side, it may be inequitable to deny tax incentives to workers with pre-existing paid leisure. Of course, cost considerations would heavily influence these equity considerations.[237] A second major problem would likely stem from efforts to insure that a reasonable portion of worktime reductions result in new jobs.

The secondary social impacts of worktime reductions stimulated by tax incentives would most likely depend upon individual need for the types of free time gained. Some individuals may require extended leaves from work to pursue mid-life retraining programs, others may need shorter workdays to cope with family and child raising responsibilities, and so forth. While there are doubtless forms of free time that are more popular than others (see tables 2-3 and 2-4), no single type of time off the job will be valuable to all persons. Thus, union and organizational policies pro-

viding only one or limited types of time-income trade-offs may be oppressive to a significant number of individuals. As such, the secondary utility of certain types of worktime reductions may be a disutility for many.

All in all, the concept of using preferential taxation to stimulate long term worktime reductions is a largely unexplored but potentially valuable approach to redistributing employment. Preliminary assessment of this proposal suggests that it may involve reasonably low costs to both the private and public sector. At the same time, it is likely that such tax incentives could stimulate considerable exchange of potential income for leisure. However, major questions remain concerning how much forfeited worktime would foster new jobs, and how this job yield might be enhanced as well as targeted to those with the greatest need.

(15) Encouragement of Flexible Benefit Options

It has been noted several times that the willingness of workers to trade current or potential income for worktime reductions depends on the types of prospective free time to be gained and the extent of choice among alternative forms of free time. Certain types of free time, such as vacations and longer weekends, appear to be more popular than other types; and the proportion of workers willing to exchange income for time increases with the variety of free time schedules that are available. Correspondingly, social policies designed to stimulate long term time-income trade-offs would become increasingly effective as the variety of free time choices are expanded.

One approach to maximizing individual choices concerning whether to trade potential pay for time would be to encourage flexible benefit option programs. Such programs, which are also known as "cafeteria benefit plans," have

been tried experimentally in a limited number of firms.[238] The basic idea of these programs is that overall expenditures of fringe benefits for individuals are totaled, then individual workers are given the opportunity to choose between differing combinations of benefits to suit their personal needs within the cost limitations of their program. For example, a young worker might place emphasis on longer vacations and training opportunities within his or her benefit program while a parent of young children might be prone to select the maximum health plan and increased life insurance.[239] When raises and alternative worktime reductions have been fit into this "cafeteria plan" concept, the range of choices at the individual's discretion is expanded to include increased free time in contrast to other forms of compensation. If such programs could be encouraged within organizations, the potentials for significant long term time-income trade-offs and work sharing could be enhanced with minimum detriment to those unable or unwilling to forego income for time.[240]

The specifics of flexible benefit plans are still largely unexplored. Most important, beyond technical assistance and the removal of legal barriers preventing trade-offs between various benefits and cash,[241] there is no immediately apparent social policy leverage for stimulating the formulation of such programs. However, there are some signs that such plans will spread on their own merits. A number of work organizations have reported that such programs are manageable and well received by employees.[242] Similarly, some labor leaders are cautiously noting that flexible benefit plans facilitate the maintenance of union solidarity during collective bargaining periods because rank-and-file members are not required to make painful choices leading to one compensation and benefit package prior to negotiations.

In terms of work sharing, flexible benefit plans would likely foster worktime reductions and potentially redistribute work at no major additional costs. In addition to the time

consuming obstacle of exposing this proposal to workers and employers, there are also potential problems resulting from the complexities of administration, regulation and reversibility, and coordination of diverse worker behaviors resulting from individual choices among many benefit options. However, it would appear that these problems can ultimately be limited or resolved, and that flexible benefit options should be given further attention as a means to both share work and optimize social resources.[243]

Overview

In sum, it appears that proposals for encouraging long term time-income trade-offs for purposes of sharing work may have potential. These approaches are relatively uncostly and noninflationary, have the capacity to yield a significant number of new jobs, and potentially reflect the emerging goals and priorities of today's work force. However, it should be emphasized that many of these proposals have had little or no testing, and that many details are yet to be developed.

VOLUNTARY TIME-INCOME TRADE-OFF OPTIONS FOR INDIVIDUALS

Available data on time-income trade-off preferences also indicate that there is considerable interest among a large portion of today's workers in exchanging some part of current income for more free time (see table 2-4).[244] This observation has caused a number of persons to suggest that volunteeristic programs might be developed which allow individuals to trade current earnings for more free time, thus opening job time for those who are unemployed or in danger of being laid off.[245] Although this concept has had only limited application to date, a brief description of two case examples will help illustrate how it might work on a national scale.

One of the more interesting applications of voluntary time-income trade-off options was started in the United States by the Santa Clara County Government in California.[246] In 1976, the county faced a severe budgetary cutback which would require significant layoffs. After a long series of negotiations, the local unions reluctantly agreed[247] to a voluntary work sharing program in which individual employees were given the options of keeping their current pay and hours, exchanging 5 percent of current annual income for 10.5 added days of paid vacation, 10 percent of earnings for 21 days vacation, or as much as 20 percent for 42 days of vacation taken in two periods.[248] In response to the threat of imminent layoffs and the desire for more leisure, some 17 percent of the 10,000 county workers voluntarily requested one of these trade-off options in the first year. Most workers chose the 5 and 10 percent trade-off options,[249] enough worktime was foregone to avoid layoffs, and the idea of trade-off options became so popular among rank-and-file workers that involved unions made it a plank in subsequent collective bargaining negotiations.[250]

The Public Defender's Office in nearby Alameda County in California introduced another time-income trade-off program which proved to have job creating potential. In 1977 it was noticed that the heavy caseloads of the lawyers employed by this office was leading to extreme exhaustion and demoralization. In an attempt to provide attorneys and other staff the opportunity for rest and self renewal, Chief Public Defender James Hooley instituted a voluntary trade-off program which allowed employees to forfeit 25 percent of annual pay for a three-month extended vacation. Subsequently, about 16 of the office's 100 attorneys have selected this "renewal sabbatical" each year, and the office has found it possible to hire 4 additional replacement attorneys with the foregone pay.[251]

Other similar programs have been applied elsewhere. In Germany, for example, a number of firms have initiated annual "workyear contracts" in which employees and employers negotiate individual worktime arrangements each year. Apparently, this approach periodically adjusts worktime to individual needs, provides employers with predictable labor supplies, and frequently requires new hiring.[252] In an effort to provide more permanent part-time jobs and options to adjust worktime to family needs, the Swedish government has provided options to voluntarily shift back and forth between full- and part-time work,[253] presumably with the creation of more jobs with less than full-time hours. Similarly, the notion of "job splitting," in which two persons share one full-time job, has been increasingly applied.[254]

The notion of encouraging voluntary time-income tradeoffs as a means of reducing worktime and creating jobs has been receiving some policy attention,[255] and most recently legislative and programmatic initiative by the State of California. James Mills, the President of the California State Senate, has introduced and gained partial passage of legislation for an experimental time-income trade-off program which he calls "leisure sharing."[256] The program, which has two parts designed to encourage trade-off options in both the public and private sectors, has been proposed explicitly as a job creation program. While the administrative details are still being developed, part of this program is intended to provide government subsidies to partially compensate private employers for increased fixed labor costs resulting from worktime reductions. The initial stages of the program provide technical assistance to interested employers and employees. Participation by workers and firms is intended to be completely voluntary and subject only to minor regulations. Particularly, some eligibility criteria may be established to guarantee that a minimal proportion of foregone

worktime is transformed to new employment.[257] Mills believes that this approach has considerable appeal in a tight fiscal era because it is volunteeristic and reasonably uncostly. In observing the unique aspects of this approach, he notes that "the unemployed are asked to trade in their enforced idleness for a job. What was the prospect of . . . dreary inactivity for one jobless worker now becomes a valued commodity called leisure when it is picked up in . . . increments by fully employed workers who want a little more time off." He further questions, "Does this modest approach to saving or creating job opportunities make less sense than the present system of taxing the wages of many hours of work to finance welfare payments to able-bodied workers who cannot find jobs?"[258]

The general notion of voluntary time-income trade-off options as an approach to redistributing employment is a novel idea which merits considerable attention. Public policies to foster this approach to work sharing would presumably focus on the removal of existing barriers to worktime reductions, and possibly limited incentives to employers for the provision of trade-off options for the purposes of creating jobs. Two general policies to foster such trade-off options will be discussed. First, the impact of neutralizing various payroll taxes paid by employers will be briefly outlined. Second, a more extensive assessment will be made of government tax incentives or subsidies to neutralize the extra costs of reducing worktime and perhaps encourage new hiring.

(16) Neutralization of Payroll Taxes

It has been generally noted that employer payroll taxes cause barriers and distortions in the upward or downward adjustment of worktime. In the United States, for example, employer payroll taxes for social security and unemployment insurance are paid only to some maximum employee earning level each year. In 1979, employers were required to only pay

social security taxes on the first $22,900 earned by each employee each year, and UI taxes on the first $6,000. As a result, it frequently costs an employer higher payroll taxes to have employees on reduced worktime. For example, in 1979 it would cost an employer $222 more in UI and social security taxes to have two half-time workers earning $7,500 as opposed to one earning $15,000 (see table 3-14 for further illustrations of variation of payroll taxes with worktime).[259] As another example, German employers are not required to make payroll taxes for workers employed under 20 hours a week, thus creating a notable disincentive for increasing the worktime of such part-time personnel and an incentive to use more part-time workers.

In terms of avoiding disincentives to both upward and downward worktime adjustments, it would appear highly desirable to not only eliminate threshold and ceiling earning levels for the payment of payroll taxes, but also acute notches in tax determination formulas (e.g., tax rates which jump 10 percent at $6,000 income, another 10 percent at $7,000, etc.). While it may be ideal to have near continuous payroll tax scales[260] with no minimum and extremely high or nonexistent ceilings, political and budgetary considerations would likely make such reforms impractical. However, the minimization of payroll tax discontinuities would be a significant adjustment paving the way for the emergence of time-income trade-off options as well as most other approaches to work sharing.[261]

(17) Subsidies for Worktime Reduction Options

Government subsidies to attenuate increased employer costs resulting from worktime reductions and possibly provide incentives for implementing options for such reductions would likely be the most effective and flexible means of encouraging time-income trade-off options. Although there is little empirical data on this topic, a number of issues have

Table 3-14
Illustrative Variation of Selected U.S. Payroll Taxes for Employer Maintaining the Equivalent of 100 Full-Time Workers by Variations of Pay Level and Worktime

Pay levels and employer payroll taxes / Distribution of work time	100 workers 100% time, 2000 hours per year (dollars)	111 workers 90% time, 1800 hours per year (dollars)	125 workers 80% time, 1600 hours per year (dollars)	142 workers 70% time, 1400 hours per year (dollars)	167 workers 60% time, 1200 hours per year (dollars)	200 workers 50% time, 1000 hours per year (dollars)
$10,000 full time annual pay						
Payroll taxes per employee	835	774	712	651	590	492
Total taxes per employer	83,500	85,880	89,050	92,456	98,497	98,300
Added taxes per worker	--	23.89	55.50	89.56	149.97	148.00
Payroll taxes per labor hour	.42	.43	.45	.47	.49	.49
$15,000 full time annual pay						
Payroll taxes per employee	1,142	1,050	958	866	774	682
Total taxes per employer	114,150	116,501	119,700	122,922	129,208	136,350
Added taxes per worker	--	23.51	55.50	87.72	150.58	222.00
Payroll taxes per labor hour	.57	.58	.60	.62	.65	.68
$20,000 full time annual pay						
Payroll taxes per employee	1,448	1,325	1,203	1,090	957	835

otal taxes						
per employer	144,800	147,119	150,350	154,808	159,919	167,000
dded taxes						
per worker	--	23.19	55.50	100.08	151.19	222.00
ayroll taxes						
per labor hour	.72	.74	.75	.78	.80	.84
5,000 full time						
ual pay						
ayroll taxes						
per employee	1,626	1,601	1,448	1,295	1,141	988
otal taxes						
per employer	162,577	177,739	181,000	183,855	190,631	197,650
dded taxes						
per worker	--	151.62	184.23	212.78	280.53	350.73
ayroll taxes						
per labor hour	.81	.89	.91	.92	.95	.99
0,000 full time						
ual pay						
ayroll taxes						
per employee	1,626	1,626	1,626	1,509	1,325	1,142
otal taxes						
per employer	162,577	180,460	203,221	214,320	221,134	228,300
dded taxes						
per worker	--	178.83	406.44	517.44	585.58	657.23
ayroll taxes						
per labor hour	.81	.90	1.02	1.08	1.11	1.14

OTE: For purposes of demonstrating the impact of payroll taxes on worktime it is assumed that the employer must maintain aggregate hours labor equal to 100 full-time workers. In the U.S., employers in 1979 paid 6.13 percent of each employees, first $22,900 earnings for Social curity, and an estimated 3.7 percent of the first $6,000 for Unemployment Insurance.

EFINITIONS:

ayroll taxes per employee" refers to the combined UI and Social Security payroll taxes paid by the employer for each employee.
otal taxes per employer" refers to the total of all UI and Social Security payroll taxes paid by the employer for all employees.
dded taxes per worker" refers to additional payroll taxes paid by the employer over what would have been paid per full-time worker.
ayroll taxes per labor hour" refers to the payroll taxes for UI and Social Security paid by the employer for every hour of labor received.

been raised, and these will be discussed within the context of the evaluation criteria applied to previously assessed approaches to work sharing.

The impact of a subsidy program to encourage time-income trade-off options on productivity and inflation is difficult to pinpoint. Ultimately, the principal cost of such a program would depend on the amount of subsidization required to induce a significant proportion of employers to set up such options. Assuming that several workers would have to give up a total of worktime equivalent to a full-time job before an employer would hire a new employee,[262] and that the quantifiable extra costs of this new worker to an employer would be roughly equal to the fixed costs of a full-time worker; it is reasonable to speculate that the amount of government subsidy required to encourage time-income trade-offs resulting in new jobs would roughly equal the value of these extra fixed costs.

To illustrate potential costs, the average U.S. employer spends about 30 percent (or about $6,000 a year in 1980 dollars) on accountable fringe benefits per worker, a significant portion of which are fixed despite variations of worktime.[263] Thus, it might be assumed that the government would have to offer a sizable subsidy for each new job, and since each new position created in this fashion would not likely increase aggregate work hours or productivity, the impact would be inflationary. Further, reduced worktime and income among workers foregoing earnings for time would likely lessen aggregate tax revenues due to progressive income tax systems. Further, productivity could be reduced if new worktime arrangements cause organizational inefficiencies.

There are, however, a number of factors which could attenuate these costs. First, a ceiling might be placed on the subsidy so as to reduce the above-noted average subsidy

substantially.[264] Second, many employers may discern organizational benefits (e.g., lower absenteeism, reduced turnover, higher morale and productivity, retraining and reduced skill obsolescence, more management flexibility, etc.) as resulting from voluntary trade-off options,[265] and therefore require less than full reimbursement for increased labor costs. Most notably, if voluntary trade-offs become popular as fringe benefits, employers may find it desirable to provide such options in lieu of other forms of compensation in order to competitively recruit and retain personnel.[266] Third, the pay and benefits of new workers hired to replace worktime foregone as a result of trade-off options would likely be lower than that of senior employees. Fourth, workers desiring to trade income for time might also be willing to share some of the extra costs in some prorated fashion.[267] Finally, widespread voluntary trade-off options might reduce the necessity for expenditures on social programs such as day care centers, social security and unemployment insurance.[268] Thus, there are a number of reasons why minimal government subsidies might be somewhat lower than actual increases of fixed labor costs. Nonetheless, even partial reimbursement to employers for costs entailed would be substantial and program details to insure job creation and minimal curtailment of abuses could add to these expenditures. Ultimately, the issue of costs must be assessed in comparison to other employment programs with the help of more theoretical analysis and data from limited experimentation.

The question of whether an acceptable portion of worktime foregone as a result of voluntary trade-off options would lead to the creation or preservation of jobs is equally difficult to answer. The hope that some have expressed for this approach to creating jobs is based on the possibility that desire for more free time among many workers, need on the part of employers to replace some portion of any foregone

worktime with new employees, and the job creating potentials of existing wage subsidy programs[269] might provide a novel and potent mix of factors to effectively redistribute work.[270] Available evidence demonstrates that wage subsidies which attenuate fixed labor costs tend also to encourage worktime reductions.[271] If ways can be found to allow or encourage employees to voluntarily forfeit worktime, it seems reasonable that such partial subsidization of costs to employers would also encourage a reasonably high level of new hiring rather than increased capitalization or reduced productivity; this would be particularly so if receipt of subsidies is in some part determined by new hiring as well as worktime reductions. Presumably, organizations which allow some workers to reduce worktime and then hire new workers into the same production units would be hiring to replace lost labor and this would be a de facto demonstration of spreading work among more persons. Job preservation, or the prevention of layoffs, would be more difficult to assess.

Since job creation and preservation would be the primary goal of this program, it would seem particularly advisable to make payment of government subsidies conditional upon the demonstrated worktime reductions and new job creation. Optimal results might be gained by providing graduated subsidies up to some maximum in accord with the proportion of foregone worktime replaced by new workers.[272] Similarly, the amount and availability of the subsidy might be varied by increments in accord with several "trigger levels" of unemployment.

Given that voluntary trade-offs proved to be an efficient means of redistributing employment, what would be the extent of participation and aggregate impact of such programs? Speculations on this issue must be made from the standpoint of both employers and employees. From the standpoint of employers, the capacity to provide time-

income trade-off choices and create jobs as a result of foregone worktime would vary greatly according to organizational constraints. Some employers could provide trade-off options but produce few new jobs as a result of worktime reductions. Others could produce options and a high job yield. Still others would be severely limited concerning the types of trade-off options that might be possible (e.g., shorter workdays, vacations, etc.). While few organizations would be likely to instigate a total range of trade-off options with perfect replacement rates, it is likewise probable that few organizations would have absolutely no capacity for some type of trade-off program.[273]

From the standpoint of workers, available evidence suggests considerable willingness to forego earnings for more free time. As previously noted, a 1978 survey of American workers found that the average worker would forego 4.7 percent of current earnings for his or her most desired form of free time.[274] In terms of the U.S. workforce, this would amount to a forfeiture of some 8.6 billion hours of work or 4.2 million full-time work years. If these findings are somewhat reflective of real choices that might be made[275] there would appear to be a notable potential for creating jobs by promoting voluntary time-income trade-offs. However, it is crucial to note that this same survey shows that certain types of free time are more popular than others and that the propensity of the work force to forego earnings for time increases with the variety of potential types of free time that are made available.[276] Thus, special incentives might be considered to encourage employers to instigate a variety of trade-off options, thus enhancing employee participation. For example, employers might be given a slight increment in subsidies for every type of time-income trade-off option made available to their workers. Additionally, worker participation would likely be increased if employees were given some power of initiative to stimulate the creation of trade-off options.

One possibility for increasing such individual initiative would be to invest the subsidy for worktime reductions with the worker in the form of a voucher. Under these conditions, individual workers or groups of workers might approach employers with subsidies to cover the extra costs of desired worktime reductions. In this way, the attention of employers would be directed to this program by both the government and workers, serving to maximize participation. Whether or not resulting participation and impact on unemployment would be significant is still a matter of conjecture. However, if only 20 percent of a 100 million worker labor force were to find it possible and desirable to give up an average of 10 percent of income for time, and only 50 percent of this foregone worktime created new jobs, some one million new full-time workers would be hired. Correspondingly, 50 percent of a 100 million workers labor force foregoing 10 percent of current earnings, which is approximately the stated preferences of a previously noted national survey on time-income trade-off preferences (see table 2-4), would create 2.5 million jobs under the same conditions (see table 2-5).

There are two issues of social equity which merit attention. First, willingness to forego earnings for time is likely to be greatest among more affluent workers, thus raising the question of whether government subsidies to stimulate time-income trade-off options would only be a benefit to upper income groups. In one sense this is true, but if the program goal of opening jobs is achieved, there would be an expansion of employment opportunities which would presumably reduce joblessness and perhaps foster upward social mobility for lower income groups. Second, it is likely that government expenditures for subsidies to attenuate the extra costs related to worktime reductions will be highest among more affluent workers with the most generous fringe benefits. Thus, it would easily cost much more to free jobs in some occupations and industries than it would in others. Once again, this

raises questions of equity. Some portions of this problem might be resolved by a ceiling limiting the amount of subsidy. For the most part, however, the counterbalancing social equity consideration would focus on the jobs made available and the distribution of these jobs. Presumably, some incentive or regulation might be instigated to target some portion of jobs created to those in greatest need.

Assuming that the administration of a voluntary trade-off program does not become too cumbersome, this approach to work sharing would appear to manifest the greatest possible flexibility for implementation and termination. With the exception of minimal restraints on shifting back and forth between agreed upon worktime arrangements,[277] the voluntary trade-off approach to work sharing offers maximum short- and long-run adaptability in response to changing individual, organizational and labor market conditions. Further, a variety of triggering mechanisms could adjust the attractiveness of the program in accord with the level of unemployment. Finally, the trade-off approach embraces virtually all forms of worktime reductions thus far considered, whether they be shorter workdays, reduced workweeks, longer vacations, sabbaticals, permanent part-time or "job splitting."

The greatest potential problem with subsidies to encourage work sharing through voluntary trade-offs are likely to stem from administration and regulation. First, any increased specification, such as a job creation requirement or targeting, will increase administrative difficulties as well as discourage participation and compliance. Second, there may be a serious problem with insuring the accountability of participants. Most important, the task of determining whether or not new jobs are created and, what is more difficult, preserved, would require constant and sophisticated monitoring. Operational guidelines would have to be carefully designed with the goal of optimizing desired im-

pacts with a minimum of regulation. It may not be possible to develop an effective and efficient administrative mechanism.

Finally, the encouragement of voluntary time-income trade-off options would likely have tremendous secondary social benefits. Trends from survey and behavioral data indicate a strong and growing preference on the part of workers for more flexibility in determining worktime arrangements.[278] Additionally, worktime flexibility and reductions can be expected to attenuate numerous social problems concerning transitions from school to work, needs for mid-life retraining, child care, time related family tensions, equal employment access for working parents, dwindling affirmative action gains, transitions to retirement, recovery from illness and stress and the basic desire for more leisure.[279] The encouragement of voluntary trade-off options could provide worktime conditions to help reduce problems in all of these areas. Indeed, the enactment of such a program may be economically and socially justified regardless of its job creation impacts.

Overview

To summarize, the notion of sharing work through voluntary time-income trade-off options is a new and relatively unexplored concept. Preliminary assessment suggests that it may have the potential for fortuitously combining the desire for more time off the job evidenced by a significant portion of today's employees with incentives from the government, to effectively redistribute employment to those in need of work. Since this exchange of unwanted work for unwanted "leisure" would be essentially voluntary, the resulting redistribution should be a benefit to all. The principal issues to be resolved are whether ample jobs could be created in this fashion, and whether the costs and administrative complications would be acceptable relative to other approaches to combating employment.

NOTES

1. Juanita Kreps, *Lifetime Allocation of Work and Income,* Duke University Press, Durham, NC, 1971, pp. 73-75; and William Leuchtenburg, *Franklin Roosevelt and the New Deal,* Harper and Row, New York, 1963, pp. 103-106.

2. Phyllis Lehmann, "Willard Wirtz: Candid Answers About Joblessness," *Worklife,* February 1979, pp. 2-5.

3. Fred Best, *Flexible Life Scheduling: Breaking the Education-Work-Retirement Lockstep,* Praeger, New York, 1980, pp. 65-66.

4. John Zalusky, "Shorter Workyears—Earlier Retirement," *AFL-CIO American Federationist,* August 1977; and Best, *Flexible Life Scheduling,* p. 75.

5. Philip L. Rones, "Older Men—The Choice Between Work and Retirement," *Monthly Labor Review,* November 1978, pp. 3-10.

6. Lenore Epstein Bixby, "Retirement Age Policy and Employment," *Work Time and Employment,* Special Report No. 28, National Commission for Employment Policy, Washington, DC, October 1978, pp. 345-396.

7. Michael Rubenstein, "Belgium Combats Unemployment with Improved Early Retirement," *World of Work Report,* August 1977, pp. 86-87; and R.A. Hart and P.J. Sloane, "Working Hours and the Distribution of Work," paper prepared under contract from the OECD for the Conference on Collective Bargaining and Government Policies, Washington, DC, July 1978, pp. 28-32.

8. Alicia Munnell, *The Future of Social Security,* Brookings Institution, Washington, DC, 1977, p. 220; *1976 Statistical Abstract of the United States,* Washington, DC, GPO, p. 411; and Kreps, *Lifetime Allocation* p. 28.

9. Rubenstein, "Belgium Combats Unemployment," p. 87.

10. Harold Sheppard and Sara Rix, *The Graying of Working America,* The Free Press, New York, 1977, p. 17.

11. Best, *Flexible Life Scheduling,* pp. 67-70.

12. Munnell, *Future of Social Security,* p. 78; and *1976 Statistical Abstract of the United States,* p. 61.

13. Susanna McBee, "Census Sees More Elderly by Next Century Than Anticipated," *Washington Post,* June 11, 1978, p. A9.

14. *The Statistical History of the United States,* Fairfield , Stamford, CN, 1965, p. 71; and *Employment and Training Report of the President,* 1979, U.S. Department of Labor, Washington, DC, p. 236.

15. *Employment and Training Report of the President,* 1979.

16. Fred Best, "Retirement and the Lifetime Distribution of Work," *Aging and Work,* Summer 1979, pp. 173-181.

17. Best, *Flexible Life Scheduling,* pp. 75-76; and Edith F. Lynton, "Alternatives to Layoffs," New York Commission on Human Rights, New York, April 3-4, 1975, p. 16.

18. Hart and Sloane, "Working Hours," p. 29.

19. Joseph Quinn, "Comment on Retirement Age Policy and Employment," *Work Time and Employment,* pp. 397-409; and Dean Morse and Susan Gray, *Early Retirement: Boon or Bane?,* Allanheld, Osmun and Co., New York, 1980.

20. Hart and Sloane, "Working Hours," pp. 29-31.

21. Figures are based on the relative performance of earlier retirement with job release requirements, which presumably have close to a one-for-one replacement ratio (Hart and Sloane, "Working Hours," pp. 29-31; Department of Employment, "Measures to Alleviate Unemployment in the Medium Term: Early Retirement," *Department of Employment Gazette,* London, March 1978).

22. Hart and Sloane, "Working Hours," pp. 29-32; and Jef Van Langendonck, "Pushed Out of the Cookoo's [sic] Nest: The Preference for Young Over Older Workers in Belgian Social and Economic Policy in Time of Recession," in *Reexamining European Manpower Policies,* Special Report No. 10, National Commission for Employment Policy, Washington, DC, August 1976, pp. 147-148.

23. There is some discrepancy of reported participation for these "job release schemes" ("Pushed Out of the Cookoo's [sic] Nest," p. 29; and "Objectives and Effects of Work Sharing," Working Document, Directorate-General Employment and Social Affairs, Commission of the European Communities, November 24, 1977, p. 29).

24. In passing, it might be noted that many employers may save money or recoup losses by replacing older workers with younger employees because junior pay levels are likely to be lower than those of senior workers (Best, *Flexible Life Scheduling,* pp. 75-76).

25. Zalusky, "Shorter Workyears"; and Sar A. Levitan, *Reducing Worktime as a Means to Combat Unemployment,* W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, 1964, pp. 2-3.

26. Fred Best, "The Future of Retirement and Lifetime Distribution of Work," *Public Policy and the Future of Work and Retirement,* Select Committee on Aging, U.S. House of Representatives, May 3, 1978, pp. 90-97.

27. Fred Best, *Exchanging Earnings for Leisure: Findings of an Exploratory National Survey on Worktime Preferences,* Special Research Monograph No. 79, Office of Research and Development, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980.

28. "Doubts on Social Security's Solvency: But Survey Finds Wide Support," *Sacramento Bee,* Wednesday, May 28, 1980, p. A17.

29. Munnell, *Future of Social Security.*

30. Harold Sheppard, *Research and Development Strategy on Employment Related Problems of Older Workers,* American Institute for Research, Washington, DC, 1977 pp. 75-78.

31. Ibid.

32. Malcolm Morrison, "International Developments in Retirement Flexibility," *Aging and Work,* Fall 1979, pp. 221-234;"Objectives and Effects," p. 30; Bernhard Teriet, "Phased Retirement: A New Task for Personnel Management," *Mensch and Arbeit,* No. 2, 1977, p. 48; and Martin B. Tracy, "Flexible Retirement Features Abroad," *Social Security Bulletin,* May 1978, pp. 18-36.

33. Zalusky, "Shorter Workyears"; Sheppard, *Research and Development;* Sheppard and Rix, *Graying of Working America; Public Policy and the Future of Work and Retirement,* Hearings of the Select Committee on Aging, U.S. House of Representatives, Washington, DC, May 3, 1978; and Robert Butler, "Why Survive?" *Being Old in America,* Harper and Row, New York, 1971.

34. "Objectives and Effects," p. 30.

35. Levitan, *Reducing Worktime,* p. 12.

36. "Objectives and Effects," p. 31; and Hart and Sloane, "Working Hours," pp. 26-28.

37. Best, *Flexible Life Scheduling,* pp. 32-34.

38. Lehmann, "Willard Wirtz," pp. 2-5.

39. Fred Best and Barry Stern, "Education, Work and Leisure: Must They Come in That Order?" *Monthly Labor Review,* July 1977, pp. 5-7; Orlando Rodriguez, "Occupational Shifts and Educational Upgrading in the American Labor Force Between 1950 and 1970," *Sociology of Education,* January 1978, pp. 55-67; and Sari Gilbert, "Italy's Univer-

sities: Preparing for the Jobless Rolls," *Washington Post,* March 5, 1977, p. A11.

40. Ivar Berg, *Education and Work: The Great Training Robbery,* Praeger, New York, 1970, pp. 38-60.

41. Ibid., pp. 85-142; Charles Derber, "Unemployment and the Entitled Worker: Job Entitlement and Radical Attitudes Among the Youthful Unemployed," *Social Problems,* Vol. 26, No. 1, October 1978, pp. 26-37; and Rosabeth Moss Kanter, "A Good Job is Hard to Find," *Working Papers,* May-June 1979, pp. 44.

42. Barry Stern, *Toward a Federal Policy on Education and Work,* U.S. Department of Health, Education and Welfare, Washington, DC, 1977, pp. 16-63.

43. Berg, *Education and Work,* pp. 38-60; Stern, op. cit., pp. 34-38; and A.J. Jaffe and Joseph Froomkin, "Occupational Opportunities for College Educated Workers, 1950-1975," *Monthly Labor Review,* June 1978, pp. 15-21.

44. Richard B. Freeman, *The Overeducated American,* Academic Press, New York, 1977.

45. Andrew Spekke, "Is Going to College Worth the Investment?" *The Futurist,* December 1976, p. 297.

46. Christopher Jencks et al., *Inequality: An Assessment of the Effect of Family and Schooling in America,* Harper Colophon Books, New York, 1972.

47. Robert Havighurst and Bernice Nuegarten, *Society and Education,* Allyn and Bacon, Boston, 1975, pp. 14-133.

48. Ibid., pp. 61-85.

49. Dyckman W. Vermilye (Ed.), *Relating Work and Education,* Jossey-Bass, Washington, DC, 1977 and Best, *Flexible Life Scheduling,* pp. 34-39.

50. "Work: Desires, Discontents and Satisfactions," *Special Roper Reports,* June 1974; and Best, *Exchanging Earnings*, pp. 81 and 93-95.

51. Bruce A. Kimball, "The Origins of the Sabbath and Its Legacy to the Modern Sabbatical," unpublished paper, Office of the Assistant Secretary for Education, U.S. Department of Health, Education and Welfare, Washington, DC, August 1977.

52. Fred Best, *Flexible Life Scheduling,* Ch. 3.

53. Phillip Ritterbush, "Cycles of Education and Experience," unpublished paper, Office of the Assistant Secretary for Education, U.S. Department of Health, Education and Welfare, Washington, DC, August 20, 1975.

54. Albert Persoff, *Sabbatical Years with Pay: A Plan to Create and Maintain Full Employment,* Charter, Los Angeles, 1945.

55. "Sabbaticals Become a Major Goal," *Business Week,* October 13, 1962, p. 106; and Best, *Flexible Life Scheduling,* pp. 169-170.

56. Robert M. Hutchins, *The Learning Society,* Praeger, New York, 1968, p. 134.

57. "Xerox Sabbaticals," *Time,* September 20, 1971; "Xeroxing of Social Service," *Business World,* September 11, 1971; and "Doing Good Works on Company Time," *Business World,* May 13, 1972, pp. 166-168.

58. Jule Sugarman, "The Decennial-Sabbatical Plan," *CUPA Journal,* Summer 1977, Vol. 28, No. 3, pp. 47-52; Donald Fraser, "Social Security Sabbaticals: A New Dimension for the Social Security System," *Congressional Record,* House of Representatives, August 22, 1974, pp. H8939-H8940; Robert Rosenberg, "A Pilot Project for Extended Leaves," Working Paper No. 10, Office of Research, California State Senate, Sacramento, CA, December 1976; Otto Feinstein, "The Working Man's Sabbatical," College of Lifelong Learning, Wayne State University, Detroit, MI; Delores Melching and Merle Broberg, "A National Sabbatical System: Implications for the Aged," *The Gerontologist,* April 1974, pp. 175-181; Barry Stern, "Feasibility of a Work Sabbatical Program," Office of the Assistant Secretary for Education, U.S. Department of Health, Education and Welfare, Washington, DC, March 18, 1975; Best and Stern, "Education, Work and Leisure"; James O'Toole (Ed.), *Work in America,* MIT Press, Cambridge, 1973, pp. 119-140; and Edward Lehner, "Toward Sabbaticals for Every Worker," *New York Times,* December 16, 1978.

59. Sugarman, "Decennial-Sabbatical Plan," p. 47; and Melching and Broberg, "National Sabbatical System."

60. Feinstein, "Working Man's Sabbatical"; and Fraser, "Social Security Sabbaticals."

61. If such programs are financed by new taxes, the government or some other institution must hold these funds until sabbaticals are taken by workers (assuming that workers must be employed for a given period prior to taking leave). Thus, there is the possibility that government or some holding institution would amass funds and allow capital investments or some counterbalancing of deficit expenditures (Rosenberg, "Pilot Project," pp. 20-25; and Sugarman, "Decennial-Sabbatical Plan," pp. 4[illegible]-52). In the case of a universal national program, the dollar value of such holdings would be massive—$175 billion in 1973 by one estimate (Sugarman, "Decennial-Sabbatical Plan," pp. 50-52). While

the effects of such actuarial reserves are still unclear, the implications are important.

62. For example, it has been claimed that the U.S. Government loses about $16 billion for every one million persons employed (Feinstein, "Working Man's Sabbatical").

63. John Harrison, "How Many New Jobs in Longer Vacations?" *Steel,* August 5, 1963, pp. 25-26; and G.J. Manus, "No Vacations for Steel Demand—Labor Shortage as Result of Vacations," *Iron Age,* June 17, 1965, pp. 26-27.

64. Feinstein, "Working Man's Sabbatical"; and Sugarman, " Decennial-Sabbatical Plan."

65. "The Long Vacation—Plans of Steelworkers Vary but Few Seek Other Jobs," *Wall Street Journal,* June 26, 1963.

66. "Industry's Vacation Plan Intensifies Manpower Shortage at Mills," *Wall Street Journal,* November 5, 1964, p. 1.

67. Some observations indicate that very few U.S. steelworkers take new jobs during their sabbatical leaves ("The Long Vacation," p. 2).

68. Ibid.

69. Ibid.; and "Industry's Vacation," p. 1.

70. Levitan, *Reducing Worktime*, p. 7; and *Wall Street Journal,* April 7, 1964, p. 1.

71. Harrison, "How Many New Jobs," p. 25; and "Sabbaticals Become Major Goal," p. 108.

72. "Officials are Working Overtime as Extended Vacations Begin," *Iron Age,* December 26, 1963, pp. 25-26.

73. "Sabbaticals Become Major Goal," p. 108.

74. "Testimony of James Hooley," *Leisure Sharing.* Hearings of the Select Committee on Investment Priorities and Objectives, California State Senate, Sacramento, November 1, 1977.

75. "Sabbatical Leaves?—Most Companies Vote No," *Business Management,* February 1966, pp. 22-24.

76. Best, *Exchanging Earnings,* p. 72.

77. For example, one proposal suggests that sabbatical grants be given by application (Feinstein, "Working Man's Sabbatical"). Such a procedure would tend to favor participation by unionized workers.

78. Feinstein, "Working Man's Sabbatical."

79. "Officials Working Overtime." p. 26.

80. Sugarman, "Decennial-Sabbatical Plan," pp. 47-49.

81. Ibid.; Stern, "Feasibility of Work Sabbatical"; and Feinstein, "Working Man's Sabbatical."

82. Feinstein, "Working Man's Sabbatical."

83. Best and Stern, "Education, Work and Leisure," pp. 3-10; Sugarman, "Decennial-Sabbatical Plan," p. 47; Stern, "Feasibility of Work Sabbatical," pp.2-4; Melching and Broberg, "National Sabbatical System"; and Fraser, "Social Security Sabbaticals,' H8940.

84. A few such limited programs and initiatives are currently under way. The Rohm Corporation in Santa Clara, California has had a sabbatical plan for several years. The Federal Office of Personnel Management, under the leadership of Jule Sugarman, is developing a sabbatical program for senior civil servants, and the California Employment Development Department is giving some consideration to the possibility of establishing a voluntary option for employees to forefeit some earnings for a sabbatical leave.

85. Feinstein, "Working Man's Sabbatical"; O'Toole, *Work in America,* pp. 121-152; and Stern, "Feasibility of Work Sabbatical," pp. 80-109.

86. Hart and Sloane, "Working Hours," p. 25; Best and Stern, "Education, Work and Leisure,"pp. 10-11.

87. For an indication of this participation, see Anne McDougal Young, "Going Back to School at 35 and Over," *Monthly Labor Review,* July 1977, pp. 43-45.

88. Portions of this section are updated excerpts from Fred Best and James Mattesich, "Short-Time Compensation and Work Sharing: A New Approach to Layoffs," Special Report, California Employment Development Department, Sacramento, CA, January 21, 1980. (An abbreviated version of this report is available as "Short-Time Compensation Systems in California and Europe," *Monthly Labor Review,* July 1980).

89. Daniel Hamermesh, "Unemployment Insurance, Short-Time Compensation and the Workweek," *Work Time and Employment,* pp. 235-238.

90. The West German short-time allowance scheme, which is called Kurzarbeiter Geld (KuG) and translated as "compensation for short-time work," first made its appearance in the Placement and Unemployment Insurance Act (AVAVG) of July 16, 1927. The law was repeatedly revised, notably in 1951, 1957, 1967, and in the Employment Promotion Act of June 25, 1969.

91. Peter Henle, *Work Sharing as an Alternative to Layoffs,* Congressional Research Service, Library of Congress, July 19, 1976; and Sar Levitan and Richard Belous, *Shorter Hours, Shorter Weeks: Spreading the Work to Reduce Unemployment,* Johns Hopkins University Press, Baltimore, 1977.

92. Paul Fisher, "Notes on Work Sharing in the Federal Republic of Germany in 1978," unpublished paper prepared for the Office of Research and Development, Employment and Training Administration, U.S. Department of Labor (Contract No. 20-24-78-48), July 1978, pp. 3-4.

93. *Federal Employment Institute of the Federal Republic of Germany,* brochure describing government employment programs in effect in 1974, pp. 44-55; and *Germany: Reviews of Manpower and Social Policies,* OECD, Paris, 1974.

94. Fisher, "Notes on Work Sharing," pp. 4-5.

95. Ibid.

96. Ibid., p. 4; and Fred Best, "Short-Time Compensation and Work Sharing," National Commission for Employment Policy, Washington, DC, April 1978, p. 8.

97. Fisher, "Notes on Work Sharing," p. 5.

98. "Short-Time Compensation," *What's New in Labor and Social Policy,* Federal Republic of West Germany, Embassy to the United States, April-May 1976, p. 7; and Kurt W. Rothschild, "Working Time and Unemployment," paper prepared for the National Commission for Employment Policy, University of Linz, Austria, presented July 19-21, 1978, pp. 5-10.

99. Fisher, "Notes on Work Sharing," p. 17.

100. Lynton, "Alternatives to Layoffs."

101. Elinor Holmes Norton, Chair of the National Commission for Equal Employment Opportunity, has urged consideration of the concept ("Testimony of Emile Heller," *Leisure Sharing,* Hearings of the Senate Select Committee on Investment Priorities and Objectives, California State Senate, Sacramento, CA, November 1, 1977, pp. 153-163 and submitted statement).

102. This bill was last submitted to the New York State Legislature on March 30, 1976 under the Number 11819 by Assembly Member Seymour Posner.

103. The reports prepared as a result of this committee's activities are summarized in *Shared Work Compensation,* Special Monograph, Office

of Research, Legislation and Policies, Unemployment Insurance Service, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980.

104. Legislation (HR 7529) has been introduced by Patricia Schroeder, U.S. House of Representatives and hearings held June 26, 1980 by the Subcommittee on Public Assistance and Unemployment Compensation, U.S. House of Representatives, Washington, DC.

105. "Statement of Gene Livingston, Chief Deputy Director of the California Employment Development Department," *Leisure Sharing,* Hearings of the California State Senate Select Committee on Investment Priorities and Objectives, Sacramento, CA, November 1, 1977, pp. 66-81.

106. California State Senate Bill No. 1471 was introduced on July 11, 1978 and subsequently passed and signed by the the Governor. bill S.B. 210 was passed on July 20, 1979, signed by the Governor, and extended life of the program to December 31, 1981.

107. For example, if a recipient was eligible for a total of $3,120 in UI benefits (which is the maximum 1980 weekly benefit of $120 for 26 weeks), and received a total of $480 or $24 a week in Work Sharing UI benefits for 20 weeks, he or she would have $2,640 ($120 a week for 22 weeks) worth of regular UI if laid off after using Work Sharing UI.

108. Phone interview data provided courtesy of Joyce Radke, Work Sharing Coordinator, California Employment Development Department. Additional preliminary firm interview data are cited in Fred Best, "Short-Time Compensation in California," Hearings of the Subcommittee on Public Assistance and Unemployment Compensation, U.S. House of Representatives, Washington, DC, June 26, 1980.

109. A special comprehensive evaluation of the California short-time program is now under way, with a final report scheduled for December 1981 ("Proposal for Statewide Evaluation of the California Shared Work Unemployment Compensation Program," Shared Work Evaluation Unit, California Employment Development Department, Sacramento, CA, September 25, 1979).

110. Fred Best, "An Introduction to Short-Time Compensation," *Shared Work Compensation,* Special Research Monograph, Office of Research, Legislation and Program Policies, Employment and Training Administration, U.S. Department of Labor, Washington, DC, 1980, Ch. 1.

111. Daniel Hamermesh, "Unemployment Insurance," pp. 249-253.

112. Peter Henle, "Comment on Unemployment Insurance, Short-Time Compensation and the Workweek," *Work Time and Employment,* pp. 266-268. A recent analysis of this issue published just prior to the completion of this study indicates that about 1.8 percent of the employed labor force may share work without STC benefits (Robert Bednarzik, "Worksharing in the U.S.: Its Prevalence and Duration," *Monthly Labor Review,* July 1980, pp. 3-12).

113. "Comments of John L. Zalusky, Economist, Department of Research, AFL-CIO National Headquarters," to the National Commission on Unemployment Compensation, New York, August 24, 1979.

114. The nature and complications of empirically examining this issue are discussed in Fred Best, Nancy Cates, Barbara Chrispin, Norman Skonoud and Stephen Story, "Issue Elaboration, Hypothesis and Empirical Tests," Shared Work Evaluation Unit, California Employment Development Department, Sacramento, CA, April 1980.

115. Gunther Schmid, "Selective Employment Policy in West Germany: Some Evidence of Its Development and Impact," International Institute of Management, Discussion Paper Series, Berlin, July 1978, p. 16.

116. Best and Mattesich, "Short-Time Compensation."

117. Schmid, "Selective Employment Policy," p. 14.

118. "Negative Balance" employers are those whose UI tax contributions are less than the amounts drawn by their employees.

119. All German firms pay a uniform unemployment and subemployment compensation tax. Thus, contributions do not vary by firm employment history (Fisher, "Notes on Work Sharing," pp. 4-5).

120. Ibid., p. 8.

121. *UI Claimant Characteristics Study,* July 1, 1976 and June 30, 1977, Employment Data and Research Division Estimates Group, California Employment Development Department, Sacramento, CA, January 1979, p. 9.

122. Best, *Exchanging Earnings,*

123. Fred Best, Gary Lefkowitz, Maureen McCarthy, Gail Rosenberg and Barry Stern, "Exploratory Survey on Short-Time Compensation," *Shared Work Compensation,* UI Occasional Paper, Office of Research, Legislation and Program Policies, Unemployment Insurance Service, U.S. Department of Labor, Washington, DC, 1980.

124. Hamermesh, "Unemployment Insurance," p. 248; and Frank Schiff, Committee for Economic Development, Testimony before the Joint Economic Committee, U.S. Congress, Washington, DC, 1976.

125. Schiff, Testimony before JEC, pp. 15-16.

126. Schmid, "Selective Employment," 14.

127. Best and Mattesich, "Short-Time Compensation," pp. 31-32; and Best, "Short-Time Compensation in California."

128. Schmid, "Selective Employment Policy," pp. 43-44.

129. Ibid., p. 44.

130. Fisher, "Notes on Work Sharing," p. 23.

131. Of the rare incidences of cited abuses, the most frequently mentioned include work "speed ups" requiring employees to produce as much on short hours as they did on regular time (Best, "Short-Time Compensation," p. 12), employment in "second jobs" during reduced workweek without reduction in STC payments (Fisher, "Notes on Work Sharing," p. 21), unreported "black work" which is not recordable due to cash payment of workers by employers (Ibid., p. 23), worker-employer collusion to provide subsidized leisure of work (Ibid., p. 22), and use of short-time compensation to support inefficient firms where obvious managerial changes would make both layoffs and shorter workweeks unnecessary (Ibid., p. 22).

132. Bruce Millen, "Job and Income Protection Measures for Worker in Sweden, Germany and England," Office of the Assistant Secretary for Policy, Evaluation and Research, U.S. Department of Labor, July 13, 1978, p. 10.

133. Fisher, "Notes on Work Sharing," p. 7.

134. Ibid., p. 6.

135. Ibid., pp. 15-16.

136. Best and Mattesich, "Short-Time Compensation," p. 8.

137. Ibid., p. 4.

138. Foreword by Willard Wirtz to Best, *Flexible Life Scheduling.*

139. Best, "Short-Time Compensation," p. 31.

140. *Employment and Training Report of the President,* 1979, p. 274, Table A-27.

141. Zalusky, "Comments"; Howard Young, "Comment on Evaluations of the Need for Work Time Reduction," *Work Time and Employment,* "A Cure for Unemployment," *Business Week,* October 29, 1979, pp. 163-164; and Best, Lefkowitz, McCarthy, Rosenberg and Stern, "Exploratory Survey."

142. Best, Lefkowitz, McCarthy, Rosenberg, and Stern, "Exploratory Survey"; "A Cure for Unemployment," pp. 163-164.

143. Only a handful of utopian thinkers have suggested greatly enhanced guaranteed income programs as a means of reducing the labor force in response to worker displacement projected to occur from automation (Robert Theobald, *The Guaranteed Income,* Doubleday, Garden City, NY, 1965).

144. Manpower and Social Affairs Committee, "Unemployment Compensation and Work Incentives," *Manpower and Employment Measures for Positive Adjustment,* OECD, Paris, April 26, 1979, Annex IV.

145. Melvin Reder, "Hours of Work and the General Welfare," in Clyde Dankert et al. (Eds.), *Hours of Work,* Harper and Row, New York, 1965, pp. 179-200.

146. Alastair Evans, "Measures to Make Jobs Go Round," *Personnel Management,* January 1979,p. 34; Christian Tyler, "Unions' Crusade for the Shorter Working Week," *Financial Times,* June 2, 1978; Robert Taylor, "Work Sharing and Worklessness," *New Society,* November 23, 1978,pp. 452-454; Beatrice Taupin, "35 Heurs: Pas de Meracle," *Le Figaro,* May 15, 1979, pp. 1 and 7; "Objectives and Effects," pp. 25-27; Hart and Sloane, " Working Hours," pp. 9-13; Jerry Flint, "Unions Meet Resistance in Trying to Cut Workweek," *New York Times,* April 16, 1978; Bernie Cloff, "Unions Campaign to Shrink Work Week," *Business Week,* April 24, 1978; John Conyers, "The Continuing Crisis of Unemployment," *Congressional Record,* September 18, 1978, pp. E5056-E5058; and Levitan, *Reducing Worktime,* pp.13-26.

147. Joyce Nussbaum and Donald Wise, "The Overtime Pay Premium and Employment," *Work Time and Employment,* pp. 312-313.

148. *Interim Hearing on Mandatory Overtime Bill AB 1295,* Committee on Industrial Relations, California State Senate, November 7-8, 1977.

149. For example, the Fair Labor Standards Act in the United States requires time-and-a-half pay for all work conducted after 8 hours a day or 40 hours a week, with some provisions for double time pay under select conditions.

150. Paul Rosenstiel, "From Wage Hikes to Job Security: The Union's New Tune," *The Nation,* December 31, 1977; John Conyers, "First National All-Unions Conference to Shorten the Workweek, April 11, 1978," *Congressional Record,* April 13, 1978, pp. H2896-H2900; Jean Ross-Skinner, "Europe Gambles on Work Sharing," *Dun's Review,* September 1978, pp. 114-120; and *Wales T.U.C. Fourth Annual Report,* October 21, 1977, pp. 6-10.

151. Paul Douglas and Joseph Hackman, "The Fair Labor Standards Act of 1938," *Political Science Quarterly,* March 1939, pp. 29-53.

152. Best, *Flexible Life Scheduling,* pp. 86 and 92; *1977 Handbook of Labor Statistics,* p. 237; and Nussbaum and Wise, "Overtime Pay," p. 317.

153. Joseph Garbarino, "Fringe Benefits and Overtime as Barriers to Expanding Employment," *Industrial and Labor Relations Review,* April 1964, pp. 426-444.

154. Ibid., pp. 426-429.

155. Levitan, *Reducing Worktime,* pp. 12-26.

156. Garbarino, "Fringe Benefits," pp. 426-429; and Clayton Fritchey, "Pushing for a Shorter Work Week," *Washington Post,* May 20, 1978, p. A15.

157. *Interim Hearings on Mandatory Overtime.*

158. Nussbaum and Wise, "Overtime Pay,"pp. 322-324.

159. Garbarino, "Fringe Benefits," pp. 426-436; and Nussbaum and Wise, "Overtime Pay," pp. 322-324 and 327.

160. Keynote speech by Frank Runnels, First National All-Unions Conference to Shorten the Workweek, Detroit, MI, April 11, 1978.

161. Garbarino, "Fringe Benefits," p. 431.

162. Ibid., p. 434.

163. Ibid., pp. 426-444.

164. While the extent of such increases of labor costs are highly speculative, a rough upper estimate of the costs of a double-time-and-a-half premium can be computed. Given that 5.9 percent of the 69.5 million full-time U.S. employees worked overtime with premium pay in 1978 and that the extent of overtime can be assumed to be about nine hours a week, the average hourly costs of labor for such workers with a fixed fringe benefit package costing 35 percent of base pay for a standard 40-hour workweek would be about 15.4 percent higher than the average hourly labor costs for employees working 40 hours a week and about 11.7 percent higher than would be the case with time-and-a-half overtime premiums. If this extra cost were to be spread over all 69.5 million workers, it can be roughly estimated that average hourly labor costs for all full-time workers would be about 0.9 percent higher if no overtime was transferred to new employment.

165. Nussbaum and Wise, "Overtime Pay," p. 327.

166. John L. Zalusky, Economist, AFL-CIO, Testimony to the Panel on Special Study of Economic Change, Joint Economic Committee, U.S. Congress, Washington, DC, June 14, 1978, p. 9 (this same testimony

observed that a collective bargaining agreement to create double-time overtime pay for retail trades in 1966 only decreased the proportion of covered workers working over 40 hours from 24 to 21 percent).

167. Garbarino, "Fringe Benefits," p. 428.

168. George D. Stamas, "Working a Long Week and Getting Premium Pay," *Monthly Labor Review,* May 1979, pp. 41-44.

169. About one-third of production employees work overtime and the average production employee works about three hours of overtime a week (Levitan, *Reducing Worktime,* p. 14; Garbarino, "Fringe Benefits," p. 428; and Nussbaum and Wise, "Overtime Pay," p. 321). Interpolation of overtime categories for all employees working over 40 hours a week indicates that overtime roughly equals 9 hours a week (George D. Stamas, *Long Hours and Overtime Pay,* May 1978, Special Labor Force Reprint No. 226, Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC, Table D, p. A-8).

170. Nussbaum and Wise, "Overtime Pay," p. 327.

171. Ibid., p. 321.

172 Douglas and Hackman, "Fair Labor Standards Act," pp. 35-37.

173. Stamas, "Working a Long Week," pp. 41-45.

174. Levitan and Belous, *Shorter Hours, Shorter Weeks,* p. 32.

175. Barbara Bry, "Anti-Overtime Bill Stirs Controversy," *Sacramento Bee,* Sunday, January 15, 1978, pp. A3 and A19; Bill Lawrence, "Extra Pay is Not Always Gold Lining for All," *Sacramento Bee,* January 15, 1978, pp. A3 and A19; *Interim Hearings on Mandatory Overtime.*

176. Hart and Sloane, "Working Hours," pp. 18-19.

177. Ibid., pp. 18-19.

178. See the section of this chapter dealing with voluntary time-income trade-offs.

179. Garbarino, "Fringe Benefits," p. 132.

180. Statement by Zalusky, JEC, p. 9; and Zalusky, "The Overtime Pay Premium and Employment: Comment," *Work Time and Employment,* p. 340.

181. Hart and Sloane, "Working Hours," pp. 11-13.

182. Cloff, "Unions Campaign," p. 30; and Flint, "Unions Meet Resistance ."

183. This legislation has most recently taken the form of the Shorter Work Week Bill (H.R. 11784), introduced by John Conyers, U.S. House of Representatives, on April 11, 1978.

184. "Measures to Alleviate Unemployment," pp. 400-402.

185. Runnels, Keynote Speech, First National All-Unions Conference to Shorten the Work Week, Detroit, MI, April 11, 1978, pp. 9 and 14.

186. If the standard workweek was reduced to 35 hours, it is likely that some workers would have their weekly pay reduced and others would not. Those who would not, would likely protect their current earnings through collective bargaining agreements ("Conyers Speaks on His Shorter Workweek Legislation," News Release, Office of Representative John Conyers, U.S. House of Representatives, April 11, 1978, p. 1).

187. Jeffrey Perloff and Michael Wachter, "Work Sharing, Unemployment and the Rate of Economic Growth" in *Work Time and Employment,* pp. 87-122.

188. Ibid.

189. For example, a 24-hours a day, three-shift organization would have to either pay overtime premiums or adjust to a less efficient production process.

190. Rosenstiel, "From Wage Hikes to Job Security," pp. 722-723.

191. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth,"pp. 87-122; Nussbaum and Wise, "Overtime Pay," pp. 317-339; and Ginzberg, Foreword to *Work Time and Employment,* pp. 1-8.

192. This 9.6 million figure was simplisticly computed by assuming that all employees working over 35 hours a week in 1978 would forego 5 hours out of their workweek. Thus, 336.5 million hours, or the equivalent of 9.6 million 35-hour-a-week jobs would be created if all foregone worktime became new employment.

193. *Shorter Hours Create More Jobs,* Public Information Leaflet, February 1979, First National All-Unions Conference.

194. Stamas, "Working a Long Week," pp. 41-45.

195. Nussbaum and Wise, "Overtime Pay," pp. 317-338.

196. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 87-122.

197. *Shorter Hours Create Jobs.*

198. "Measures to Alleviate Unemployment," pp. 400-402.

199. Perloff and Wachter, "Work Sharing, Unemployment and Economic Growth," pp. 87-122; and Ginzberg, Foreword to *Work Time and Employment,* pp. 1-8.

200. John H. Ramey, "Reduction of the Standard Workweek as a Policy Option to Reduce Unemployment and Poverty in the United States," paper presented to the National Conference on Social Welfare, Cleveland, OH, May 18-21, 1980.

201. William McGaughey, Jr., "The Shorter Workweek: Capitalism with a Human Face," unpublished manuscript, White Bear Lake, Minnesota, 1977.

202. Fred Best, Phillip Bosserman and Barry Stern, "Income-Time Trade-Off Preferences of U.S. Workers: A Review of Literature and Indicators," *Leisure Sciences,* Fall 1979, pp. 119-141.

203. Nussbaum and Wise, "Overtime Pay," pp. 317-338.

204. Archibald A. Evans, *Flexibility in Working Life,* OECD, Paris, 1973, pp. 67-68.

205. Hart and Sloane, "Working Hours," pp. 25-26; "Objectives and Effects," p. 24; and "Equal Employment Opportunity Commission Proposals on Work Sharing," *Documents,* pp. 34-35.

206. Hart and Sloane, "Working Hours," p. 26; and "Objectives and Effects," p. 24.

207. Dorothy R. Kittner, "Forced Retirement: How Common Is It?" *Monthly Labor Review,* December 1977, pp. 60-61; and Fred Slavick, *Compulsory and Flexible Retirement in the American Economy,* Cornell University Press, Ithaca, NY, 1966.

208. Sheppard, *Research and Development.*

209. Ibid., p. 75.

210. Sumner Slichter, *Union Policies and Industrial Management,* Brookings Institution, Washington, DC, 1941, pp. 160-161.

211. Curt Tausky, *Work Organizations,* Peacock, Itasca, IL, 1970, pp. 76-117.

212. Sheppard and Rix, *Graying of Working America,* pp. 135-138; Claude Pepper, "We Shouldn't Have to Retire at 65," *Parade Magazine, Washington Post,* Sunday, September 4, 1977, pp. 12-14.

213. Elizabeth Meier, *Aging in America: Implications for Employment,* Report No. 7, National Council on the Aging, Washington, DC, 1976, p. 11; and National Council for Life Insurance, *MAP '77,* Washington, DC, 1978, p. 65.

214. Havighurst and Neugarten, *Society and Education,* pp. 197-198; and Best, *Flexible Life Scheduling,* pp. 32-34.

215. Hart and Sloane, "Working Hours," pp. 26-27.

216. Ibid., p. 27.

217. "Paid Personal Holidays," *Solidarity,* October 21, 1977, pp. 6-10; A.H. Raskin, "Breakthrough in Work Hours: March Toward Four-Day, 32-Hour Workweek Begins in Earnest with Advances in Ford Pact," *World of Work Report,* October 1976, pp. 4-5; John Zalusky, "Shorter Hours—The Steady Gain," *AFL-CIO American Federationist,* January 1978, pp. 12-16; Four-Day Workweek is Wave of Future," *Daily Labor Review,* June 14, 1978, p. A-3; George DeBunne, "Shorter Working Week—A Priority for Belgian Unions," *Free Labor World,* International Confederation of Free Trade Unions, July-August 1978, pp. 24-25; and Jean Clivaz, "Shorter Hours in Switzerland," *Free Labor World,* May-June 1978, pp. 28-29.

218. Juanita Kreps and Joseph Spengler, "The Leisure Component of Economic Growth," in Howard R. Bowen and Garth L. Mangum (Eds.), *Automation and Economic Progress,* Prentice-Hall, Englewood Cliffs, NJ, 1966, pp. 128-134 (also reprinted in Fred Best (Ed.), *The Future of Work,* Prentice-Hall, Englewood Cliffs, NJ, 1973, pp. 87-92).

219. Fred Best, "The Time of Our Lives: The Parameters of Lifetime Distribution of Education, Work and Leisure," *Society and Leisure,* May 1978, pp. 95-124; and Fred Best, "Work Time Reforms in the Future: Some Long Range Implications of Expanded Part-Time Jobs and Flextime in the Federal Government," *Flextime and Part-Time Legislation,* Hearings of the Committee on Governmental Affairs, U.S. Senate, June 29, 1978, pp. 85-105.

220. Best, *Exchanging Earnings,* pp. 70-79.

221. Ibid., p. 77.

222. Ibid., pp. 76-77 and 107-109.

223. Hart and Sloane, "Working Hours," p. 19.

224. Ibid., p. 19; Clark, *Adjusting Hours,* pp. 33-34; and Bevars Mabry, "The Economics of Fringe Benefits," *Industrial Relations,* February 1973.

225. It should be noted that periodic wage and price controls within many European nations have also encouraged organized labor to bargain more heavily than would otherwise have been the case for fringe benefits rather than wage and salary increases.

226. Hart and Sloane, "Working Hours," p. 19.

227. Nussbaum and Wise, "Overtime Pay," pp. 309-311.

228. Garbarino, "Individual and Firm Work Time Decisions: Comment," *Sharing Work to Combat Joblessness,* Special Report No.

28, National Commission for Employment Policy, Washington, DC, 1979, pp. 195-200.

229. Although there is some relationship between income and length of worktime, income is likely to vary in more significant ways in accord with nontemporal factors such as occupation, education, age and seniority, sex and race. Thus, with the exception of the work and non-work decisions of second earners within family units, increased tax rates for higher earners would likely have minimal effect on worktime.

230. For conceptual and historic background on the notion of "paid leisure, U.S. Workers," *Monthly Labor Review,* March 1962.

231. Aor example, over a year's period of time, a half hour reduction of each workday without pay loss would be equal in terms of direct costs to an employer as three additional weeks of paid vacation. If worktime reductions such as shorter workdays could be counted as paid leisure, such benefits could be gained with differential taxation.

232. Potential sources of increased efficiency would be downward adjustment of labor costs in response to previous labor surpluses, increased capital intensity, more efficient organization of labor and lower pay levels of newly hired replacement labor.

233. "Les Industriels: Qui Mais . . . a' la Reduction du Temps de Travail," *L'Usine Nouvelle,* February 22, 1979, pp. 105 and 107-109.

234. For an example of worktime reductions as a long term response to industrial realignment, see "Paid Personal Holidays," pp. 6-10.

235. Best, *Exchanging Earnings,* pp. 70-79.

236. Ibid., pp. 37-40 and 64-65; and Fred Best and James Wright, "Effects of Work Scheduling on Time-Income Tradeoffs," *Social Forces,* September 1978, Vol. 57, No. 1, pp. 136-153.

237. In order to insure maximum job returns on any tax preferences given for paid leisure, it may be possible to make tax preferences for existing paid leisure conditional upon additional gains of free time, thus creating an added incentive to trade potential earnings for leisure among groups which already have substantial paid leisure.

238. John Perham, "New Life for Flexible Compensation," *Dun's Review,* September 1978, pp. 66-69.

239. For discussion and research findings concerning the diversity of worker preferences among different benefit and compensation packages, see Ibid., pp. 69-70; J. Brad Chapman and Robert Otteman, "Employee Preference for Various Compensation and Fringe Options," *Personnel Administrator,* November 1975, pp. 30-36; Stanley M. Nealey, "Deter-

mining Worker Preferences Among Employee Benefit Programs," *Journal of Applied Psychology,* Vol. 48, No. 1, 1964, pp. 7-12; and "Health and Life Insurance Mark Gains as Occupational Benefits," *World of Work Report,* April 1977, p. 43.

240. Frank W. Schiff, "Employment Taxes and Subsidies: Comment," *Work Time and Employment,* pp. 303-308.

241. Perham, "New Life for Flexible Compensation," 66.

242. Ibid., pp. 69-70.

243. In passing, it might be noted that this concept might also be applied to public program benefits available to citizens.

244. Fred Best, "Preferences on Worklife Scheduling and Work-Leisure Tradeoffs," *Monthly Labor Review,* June 1978, pp. 31-37; Best and Wright, "Effects of Work Scheduling"; S.M. Nealey and J.G. Goodale, "Workers Preferences Among Time-Off Benefits and Pay," *Journal of Applied Psychology,* Vol. 5, 1967; and Robert Quinn and Graham Staines, *1977 Quality of Employment Survey,* Survey Research Center, University of Michigan, Ann Arbor, 1978, Ch. 15 and 16.

245. James R. Mills, "Leisure Sharing: Its Time Has Come," *State Government,* Spring 1979; Fred Best, "Recycling People: Work Sharing Through Flexible Work Lives," *The Futurist,* February 1978, p. 15; and Best and Stern, "Education, Work and Leisure," p 9.

246. In the United States, counties are geo-political jurisdictions within states. Cities and towns generally exist within county boundaries, but occasionally overlap.

247. For background on original union resistance, see "County Staff May Trade Pay Cut for Time Off," *San Jose Mercury,* February 5, 1976, p. 47; and "No Mandatory Shorter Workweek!" Santa Clara Local 535 Bulletin, June 30, 1976, p. 1.

248. "Statement by Dan McCorquodale," *Leisure Sharing,* Hearings of the Select Committee on Investment Priorities and Objectives, California State Senate, Sacramento, CA, November 1, 1977, pp. 41-49; and "Statement of David Baratz," *Leisure Sharing,* pp. 49-58.

249. "Santa Clara County Time-Income Tradeoff Options Demonstrate New Approach to Work Time Reform," *NCAWP Newsletter,* National Council for Alternative Work Patterns, Washington, DC, Spring 1978, p. 6.

250. "Statement of David Baratz"; and George Newman, "County Employees Trade Money for Leisure Time," *San Jose News,* May 15, 1979, Section B.

251. "Statement of James Hooley," *Leisure Sharing,* pp. 128-135. Other Public Defender and District Attorney Offices in California and other parts of the United States are reportedly initiating similar programs.

252. Bernhard Teriet, "Flexiyear Schedules—Only a Matter of Time?" *Monthly Labor Review,* December 1977, pp. 63-64; and Willi Haller, "Flexiyear: The Ultimate Work Hour Concept," Interflex, Inc., New York, 1977.

253. Christina Jonung, "Sexual Equality in the Swedish Labour Market," *Monthly Labor Review,* October 1978, p. 33; and *Project Join,* Final Report, State of Wisconsin, Department of Employment Relations, February 1979.

254. Barney Olmsted, "Job Sharing—A New Way to Work," *Personnel Journal,* February 1977, pp. 78-81; and Gretl S. Meier, *Job Sharing: A New Pattern for Quality of Work and Life,* The W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, February 1979.

255. Robert L. Clark, "Summary of Proceedings," *Work Time and Employment,* pp. 22-24.

256. Mills, "Leisure Sharing." In response to this legislation, a limited demonstration is being designed by the California Employment Development Department to test the voluntary tradeoff concept. Complimentary efforts by the California State Personnel Board have outlined program guidelines for voluntary time-income tradeoff options ("Hearing on Reduced Worktime Program Rules," memorandum to All State Agencies, California State Personnel Board, Sacramento, CA, August 11, 1980).

257. The legislation noted can be located as California State Senate Bills 370 and 371, dated February 12, 1979, under authorship of James R. Mills.

258. Mills, "Leisure Sharing," pp. 76 and 78. For further comments by Mills, see "Opening Remarks," *Leisure Sharing,* pp. 4-17.

259. While there are moderate disincentives to worktime reductions due to resulting increases in U.S. payroll taxes for employees in the low to medium pay range, the extra costs to employers become substantially greater for upper income employees (see table 3-4, and Clark, *Adjusting Hours,* pp. 30-33 for added thoughts).

260. It should be noted that a continuous scale for determining payroll taxes need not require a constant tax rate for all earners. Taxes could vary progressively or regressively in a reasonably continuous fashion.

261. Patricia Schroeder, "Conference Address," *Sharing Work to Combat Joblessness,* pp. 405-410; Midge Miller, "Recommendation to the Advisory Council on Unemployment Compensation," *Sharing Work to Combat Joblessness,* pp. 411-417; and Clark, *Adjusting Hours,* pp. 30-33.

262. Although unlikely, it is possible that employers would hire a new full-time employee if less than the equivalent of full-time worktime were foregone.

263. This figure is a rough approximation from available U.S. data (*1977 Handbook of Labor Statistics,* U.S. Department of Labor, Washington, DC, p. 237). Similar fixed labor costs are evident in other OECD nations (Hart and Sloane, "Working Hours," p. 16).

264. For example, if the average accountable fixed labor costs in the U.S. are about $4,000 a year, it can be expected that many firms would have expenditures well in excess of this figure. Thus, establishing a ceiling around $4,000 would lead to an actual expenditure on subsidies well below this figure.

265. Although benefits received by employers from worktime flexibility and reductions vary notably by type of organization, available research suggests persuasive but inconclusive evidence of potential firm improvements (Meier, "Job Sharing," pp. 57-88; *Changing Patterns of Work in America, 1976,* Hearings of the Committee on Labor and Public Welfare, U.S. Senate, April 7-8, 1976; Stanley Nollen, Brenda Eddy and Virginia Martin, *Permanent Part-Time Employment,* Praeger, New York, 1978; "Statement of James Hooley," *Leisure Sharing; Project Join,* Committee for Alternative Work Patterns, *Alternatives in the World of Work,* National Center for Productivity and Quality of Working Life, Winter 1976; and *National Conference on Alternative Work Schedules.*

266. *2000: Tomorrow Begins Today,* Futures Research Division, Security Pacific Bank, Los Angeles, 1979, pp. 8-11; and Best, *Exchanging Earnings.*

267. Ellen A. Lazer, *Constructing an Employee Benefit Package for Part-Time Workers,* Catalyst, New York, 1975.

268. Best and Wright, "Effects of Work Scheduling," pp. 148-151; and Fred Best and Barry Stern, "Lifetime Distribution of Education, Work and Leisure: Research, Speculations and Policy Implications," Institute for Educational Leadership, Washington, DC, December 1976, pp. 11-15 and 51-61.

269. Robert Eisner, "A Direct Attack on Unemployment and Inflation," *Challenge,* July-August 1978, pp. 49-51; J. Kesselman, S. Williamson and E. Berndt, *Tax Credits for Employment Rather than Investment,* Reprint 262, Institute for Research on Poverty, University of Wisconsin, Madison, June 1977; and Robert Haveman and Gregory Christiansen, "Public Employment and Wage Subsidies in Western Europe and the U.S.," National Commission for Employment Policy, Washington, DC, July 1978.

270. James R. Mills, "A New Supply of Jobs," *Town Hall Journal,* June 28, 1977, pp. 224-226; and Schiff, "Employment Taxes and Subsidies: Comment."

271. Eisner, "Employment Taxes and Subsidies," pp. 267-302.

272. Assume for purposes of discussion that the maximum subsidy for employers for instigating a voluntary tradeoff program was $4,000 for forfeiture of worktime equal to a full-time position. A graduated subsidy might be made so that complete replacement of foregone worktime would provide the maximum subsidy, 90 percent replacement would provide a 90 percent subsidy, and so forth.

273. Best, "Individual and Firm Work Time Decisions: Comment," p. 220; and Robert A. Lee and W. McEwan Young, "A Contingency Approach to Workweek Structuring," *Personnel Review,* Spring 1977, Vol. 6, No. 2, pp. 45-55.

274. Best, *Exchanging Earnings,* p. 101.

275. For discussion of whether or not these survey findings reflect the choices that workers might make in "real life," see Ibid., pp. 140-142.

276. Ibid., pp. 63-102.

277. For example, both employer and employee might be required to honor worktime reduction agreements for at least six months or one year prior to returning to original work schedules, unless otherwise agreed by mutual consent.

278. Best, "Preferences on Worklife Scheduling,"

279. Evans, *Flexibility in Working Life;* Best, "Recycling People," pp. 5-16; Best and Wright, "Effects of Work Scheduling," pp. 148-151; J. deChalender, "Lifelong Allocation of Time," Manpower and Social Affairs Committee, OECD, Paris, November 26, 1975; Gosta Rehn, "Towards a Society of Free Choice," Manpower and Social Affairs Committee, OECD, Paris, November 12-14, 1974; and Best, *Flexible Life Scheduling,*

CHAPTER 4
The Prospects for Work Sharing

It seems fitting to conclude this volume by addressing two questions. First, which of the options discussed in the previous chapter are the most promising approaches to work sharing? Second, how do the most promising work sharing policies compare with other approaches to combating unemployment?

Clearly, this final chapter cannot provide definitive answers to these questions. A rigorous treatment of these issues would require an intricate analysis that is beyond the scope of this study. Nonetheless, preliminary assessments may serve to provide some rough comparisons and observations which will focus some of the key issues that must be resolved before the most promising work sharing options can be accepted or rejected as viable strategies for fighting joblessness.

AN EXPLORATORY COMPARISON OF WORK SHARING POLICIES

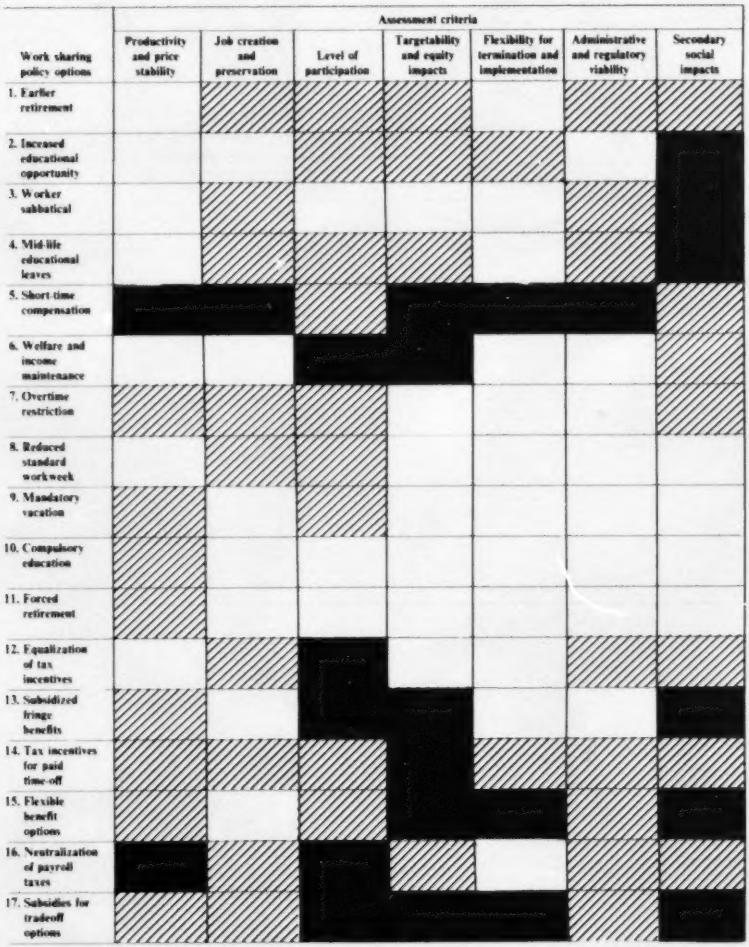
In broad overview, assessments of major work sharing proposals indicate that most options are inadvisable or only marginally promising. Among the seventeen options discuss-

ed in this volume, only two appear to be highly promising. Preliminary evaluation suggests that nine others have enough potential to justify continued attention and varying degrees of experimentation. The remaining eight do not appear to merit continued consideration.

A rough comparison of all seventeen work sharing options is presented in figure 4, which broadly summarizes and cross references the costs and benefits of each proposal in accord with the criteria used in previous chapters. Thus, each option has been assessed for its likely impacts in terms of cost and productivity, job creation and preservation (replacement of foregone worktime with new employment), degree of participation and effect on aggregate unemployment, equitable distribution of costs and benefits among employees and employers, flexibility of implementation and termination, ease of administration and regulation, and secondary social effects. Each area of impact has been broadly summarized for each work sharing approach into the three categories of (1) poor, (2) neutral or fair, and (3) good or excellent. These assessments represent the best judgments of the author, and readers may wish to re-evaluate proposals for themselves.

As noted previously, this attempt to summarize the costs and benefits of different work sharing policies suggests that only a few are promising. If all criteria are given equal weight in judging the viability of the seventeen proposals, only two options appear to be particularly promising. These two options are short-time compensation and incentives to encourage voluntary time-income trade-off options for individuals. Nine other options that may merit varying degrees of continued attention include pension systems to encourage earlier retirement, financial aid to encourage longer schooling, worker sabbaticals, adult educational leaves, welfare and income maintenance programs, neutralization of tax incentives for selected fringe benefits, public subsidization of fringe benefits, tax incentives for worktime reductions, en-

Figure 4
Cross-Impact Analysis of Work Sharing Options



CODE FOR MATRIX: (1) Poor

(2) Fair or neutral

(3) Excellent or good

couragement of flexible benefit options, and neutralization of employer payroll taxes. In most cases, these marginal work sharing approaches would only be promising with specific modifications or in combination with other policy options. In two cases, specifically financial aid to encourage prolonged schooling and income maintenance programs, there is doubt that modifications would produce effective work sharing programs. Indeed, these two options, and possibly others, were considered worthy of continued consideration because of secondary impacts not directly related to the creation or preservation of jobs.

Clearly, the weight given to each of the criteria used in assessing the alternative work sharing policies is subject to much disagreement. At the beginning of this volume, it was suggested that many work sharing approaches have been proposed for purposes other than reducing joblessness. Without intending to ignore or downplay these important secondary impacts, it seems appropriate to highlight selected criteria for the purposes of focusing on the impacts of alternative work sharing policies on employment and economic production.

A second review of work sharing options in terms of the three criteria of cost and productivity, job creation and preservation, and aggregate impact on unemployment modifies only moderately the list of promising and potentially promising approaches. Specifically, neutralization of employer payroll taxes is added to short-time compensation and voluntary time-income trade-off options to enlarge the list of highly promising policies. Correspondingly, the number of proposals which appear to merit some measure of continued attention is reduced to eight. The specific proposals falling into this second group include pensions to encourage earlier retirement, worker sabbaticals, limitation of overtime hours, reduction of the standard workweek, neutralization of tax incentives for selected fringe benefits,

public subsidization of fringe benefits, tax incentives for worktime reductions, and encouragement of flexible benefit options. Of this "second string" list, it is the author's judgment that those options with the least promise include the proposals to impose mandatory limitations on overtime and reduce the workweek. Given modification to insure work sharing effectiveness, all other options on this second list merit serious consideration.

In overview, only two of the seventeen work sharing proposals appear to be particularly promising. At the other end of the spectrum, those options entailing statutory limitation of worktime appear to be notably unpromising as a group. While the remaining options cannot be viewed as meriting priority attention, they should receive continued discussion.

COMPARING WORK SHARING WITH OTHER EMPLOYMENT POLICIES

Ultimately, the viability of work sharing must be judged in comparison to other approaches to combating unemployment. Such a comparison does not lend itself to neat and precise calculations. There are important differences between the major employment policies of our times which do not allow direct comparison. Further, existing data on these programs is rarely comparable. Nonetheless, a provisional discussion of the general costs and benefits of work sharing in contrast to other employment policies may help focus future discussion.

As a brief preview, the costs and benefits of the most promising forms of work sharing will be compared to those of income maintenance to jobless persons, macroeconomic demand management, public job creation programs, and employment subsidies. Education and job training programs will not be considered because they do not directly adjust the balance between the number of workers seeking employment

and the number of jobs available. The criteria for comparison will be roughly similar to that used to assess alternative work sharing programs. Specifically, each broad employment policy category will be generally assessed for its cost and impact on economic production, job creating or preserving capacity, extent of effect on aggregate unemployment, and miscellaneous secondary effects.

The two most promising work sharing proposals will be briefly reviewed to set the scene for assessing the viability of sharing work relative to other employment policies. Short-time compensation is clearly distinct from voluntary trade-off options. Short-time compensation programs entail a realignment of unemployment insurance payments that would otherwise have been paid to workers who were totally laid off. As such, the costs of using the program are expected to be only marginally higher than regular layoffs with unemployment insurance.[1] In other words, the costs relative to the status quo are expected to be minimal. Available data suggest that effective job preservation will be high with short-time compensation, and that a mature program could reduce aggregate full-time unemployment by as much as one-sixth during the peak of a recession such as that experienced in 1975.[2] Finally, it can be expected that use of short-time compensation would have little secondary social impact, remain highly flexible in terms of implementation and termination, and redistribute the burden of unemployment by maintaining about 90 percent of the regular weekly take-home pay of the average employee in participating work groups.[3]

Efforts to share employment by providing government incentives to encourage voluntary time-income trade-off options for individuals would have impacts different from those of short-time compensation. In terms of program costs, previous analysis suggests that it could cost up to $6,000 a year (in 1980 dollars) in subsidies to stimulate the creation of one new job if foregone worktime was totally

redistributed to new employment. Program administration costs coupled with less than total replacement rates could be expected to increase job creation costs. The job creation and preservation potentials of this approach would vary according to organizational setting and program requirements. Impact on aggregate unemployment is highly speculative, but prior analysis suggests that this approach could create a net gain of between 1 and 2.5 million jobs.[4] In terms of secondary impacts, this approach would likely be highly flexible, maximize the work-leisure preferences of individual employees, and produce a number of social benefits (i.e., reduce family time pressures, foster adult education, allow phased retirement, etc.).[5] However, unlike some employment policies yet to be considered, neither voluntary tradeoff options nor short-time compensation can be expected to result in any significant production gains to counterbalance program costs.

One of the basic questions to be addressed in assessing the viability of work sharing relative to other employment policies concerns the costs and benefits of allowing high unemployment. Given existing income maintenance and welfare programs, the Congressional Budget Office recently computed figures indicating that it would cost the government between $5,000 and $7,000 a year for every new unemployed person during 1980.[6] Implicit in the use of such income maintenance programs as a response to unemployment is the assumption that there would be no new job creation or productive economic return for these expenditures. Indeed, some analysts believe that certain income maintenance programs actually increase the rate of unemployment by providing an incentive not to work.[7] For those who cannot work, there is clearly little alternative to participation in such income maintenance programs.[8] However, for those who can work and those who might acquire the abilities to work, the social and economic impact of

the income maintenance response to joblessness is unattractive. The previously noted disincentives to work created by many of these programs can contribute to the emergence of an overly dependent, commonly impoverished and occasionally socially degenerate segment of the population who become increasingly cut off from the rewards and obligations of productive existence.[9] Without belaboring the point, the costs are high, not only in public dollars, but more important, in human misery and underutilization of productive potentials.

An impressive array of economists advocate that the best approach to reducing unemployment is to stimulate the creation of jobs by policies designed to increase aggregate demand and economic growth.[10] While the policy tools available for such demand stimulation have focused on tax reductions to increase consumer expenditures and aggregate demand,[11] other macroeconomic approaches to job creation include expansion of the money supply to encourage investment and consumer expenditures, and increased government spending to enlarge demand and stimulate economic growth.[12]

Most economists seem to agree that demand management techniques have successfully stimulated economic growth and job creation in the past.[13] However, there is disagreement about the nature and extent of these past impacts, and whether demand management can be effectively used in the context of the "stagflation" of the 1970s and 1980s. One 1975 study by the Congressional Budget Office estimated that a tax cut of $8 billion would ultimately create 320,000 new jobs, at a cost to the government, of about $25,000 a job.[14] Correspondingly, there would be an increase of economic growth and production. There is little conclusive empirical evidence concerning the impact of such macroeconomic policies on aggregate unemployment. For example, it is commonly assumed that the employment im-

pacts of tax cuts were greatest during the noninflationary period between 1964 and 1969. During this period, unemployment dropped from 5.7 to 3.5 percent. Some scholars have suggested that the tax cut of 1964 and other macroeconomic policies not only reduced the unemployment rate by 2.2 percent,[15] but enabled the labor market to absorb the large post-World War II "baby boom" generation.[16] Others have suggested that other social forces reduced joblessness during that period and that the tax cut can only be credited with a small portion of the decline in unemployment.[17] In terms of secondary impacts, advocates of macroeconomic approaches to job creation note that these policies are reasonably flexible, require little administrative apparatus, and are generally conducive to overall economic growth. Critics note that the job yield for forfeited public dollars is relatively low and that job creation cannot be targeted to those in the greatest need of employment. Finally, there appears to be a growing consensus that economic realignments and high rates of inflation are likely to limit the use of macroeconomic approaches to job creation. Indeed, the traditional expansionary use of these policies is now being reversed in many cases as a means of combating inflation. As a result, the traditional macroeconomic policy tools are likely to provide, at best, a constrained means of reducing joblessness in forthcoming years.

During times of high unemployment, policymakers have commonly looked to public job creation programs as a means of reducing joblessness,[18] particularly for social groups most burdened by the lack of employment.[19] Since its American debut in the 1930s, this approach has been criticized as a costly and ineffective way of combating unemployment. As a preface to reviewing the viability of this employment policy, it is important to recognize that these programs have, in large measure, fallen prey to public disappointment borne of "swollen rhetoric" about their potentials and un-

due criticism.[20] It is true that public job creation has not "solved" the unemployment problem as some advocates claimed it would. However, a large measure of this failure has been the result of limited application rather than the inviability of the approach. To underscore this point, it is noteworthy that the federal government spent slightly less than $4 billion during 1976 to create about 580,000 jobs to meet the employment needs of a population of 7.3 million jobless persons. If the same proportion of the GNP had been spent on public job creation as had been spent at the peak of the "New Deal," some $39 billion would have been allocated to create 5.8 million jobs.[21]

The relevant issue, then, is not whether public job creation has removed aggregate unemployment, but rather the costs and impacts of these approaches relative to work sharing and other policies. In terms of the impact of public employment programs on production and the cost of creating each job, the impacts are varied. With the exception of relatively expensive public works projects,[22] it seems safe to claim that each publicly created job costs between $6,000 and $15,000 (former figure in 1977 dollars and later in 1980 dollars).[23] To focus in a bit, one estimate of the costs of creating a public service job through the Comprehensive Employment and Training Act Program was $9,009 in 1978.[24] Unlike work sharing or income maintenance, such public service employment results in increased production in return for the costs of creating jobs. However, the level of productivity may be relatively low because many of the jobs created in this fashion are targeted to the low skilled "hardcore" unemployed. At the same time, production resulting from these jobs can be directed toward goals of priority public importance. Conceptually, the job creating capacities of these programs are immediate, with new employment resulting directly from funding for jobs. However, recent analysis has indicated that jobs funded in this fashion are frequently used

to replace already existing positions at the state and local levels. Estimates of the rate of replacement for contemporary public employment programs range from about 20 to 80 percent,[25] with the lower estimate representing the most empirically grounded figure. Thus, the net job creation of such programs can be expected to be less than the total number of positions initially funded. Theoretically, the impact of these programs on aggregate unemployment is limited primarily by the extent of funding. There are many notable secondary impacts. On the positive side, public job creation can be targeted to groups in the greatest need, and such programs can be expanded and contracted to meet changing economic conditions. On the negative side, critics have suggested that jobs created in this fashion are dead-end positions leading to no occupational security or advancement, that the work performed by persons participating in these programs has little value, and that such programs require expensive and cumbersome administrative apparatus. Available data indicate that these criticisms may have some basis in fact, but that they can hardly be said to describe public job creation programs in general.[26]

One of the most recent innovations in American job creation policy is the employment subsidy. This approach provides a public subsidy to employers for hiring persons eligible to participate in the program. This subsidy is intended to cover training and other costs of hiring, and is provided to create an incentive for employers to hire persons who have demonstrated hardship in finding employment. For the most part, these subsidies have been aimed at private sector employers.[27]

Despite the fact that employment subsidy programs are relatively new, it is possible to make a few observations about their impacts. The subsidies available under these programs have been increased substantially since this approach to job creation was first used. The most recent program pro-

vides a maximum subsidy of up to $2,100 on the first $4,200 the participating employee earns, and it is estimated that the total cost to the government of employing one person through this approach was $6,329 in 1978.[28] The difference between the amount of the subsidy and total cost of employment is largely due to the job creating efficiency of this approach. Like public job creation, there is a certain degree of "displacement" or "windfall" effect. Specifically, evidence indicates that many firms that accept the subsidy would have hired new employees without the incentive. Estimates of this effect range from 50 to 80 percent.[29] The potential impact of employment subsidies on aggregate unemployment is still highly speculative. The existence of the program is still unknown to many employers and there is no reliable data indicating the extent to which firms may choose to participate once this visibility problem is removed. Even if such subsidies were widely known and used, these programs may influence who gets new jobs as opposed to creating or spreading jobs. The secondary impacts of this program are similar to those of public job creation. On the negative side, it has been claimed that jobs created in this fashion are "dead-end" positions which tend to be terminated as soon as the subsidy is exhausted, that the productive return on jobs created in this fashion cannot be directed to meet public priorities, and that subsidies tend to cause employers to ration new hiring rather than actually create new jobs. On the positive side, this approach appears to be easily targeted to those in greatest need, and reasonably flexible in terms of adjustment to changing economic conditions. Further study is necessary before the nature and extent of these secondary impacts can be adequately assessed.

With the exception of macroeconomic policies and income maintenance programs, all of the other public responses to unemployment appear to have roughly the same costs and impacts on joblessness. The focal question then is whether

these employment policies would have redundant or conflicting effects of applied simultaneously, or whether they have unique characteristics which would allow them to be applied as productive compliments to each other?

WORK SHARING IN THE OVERALL SCHEME OF THINGS

The analysis of this volume should make it abundantly clear that the best of work sharing policies, applied in the most effective way possible, are not a panacea for the unemployment problem. Nor does work sharing hold the promise of replacing existing employment policies. Work sharing, like other approaches, has some unique characteristics which may make it acceptable and applicable where other employment policies are resisted and ineffective. Thus, work sharing at its best may hold some promise as yet another weapon in the arsenal of approaches which could contribute to what appears to be a prolonged battle against unemployment.

Past trends and prevailing speculations indicate that unacceptably high unemployment could persist for many years into the future. Since the Korean War, unemployment in the United States has crept persistently upward through a sequence of recessions and recoveries. With the brief exception of the late 1960s, unemployment has risen higher with each recession and remained higher after each recovery. What used to be considered unacceptable levels of joblessness is now considered a "full employment" goal.[30] While there are important qualifications that must be made in assessing contemporary levels of unemployment,[31] it is commonly agreed that the battle against unemployment has not been victorious. Further, "hidden unemployment," that shadowy segment of the population who have become discouraged from searching for work, adds to the problem. Indeed, as noted previously, one labor economist estimated that a full

17 million persons would have sought employment in 1977 if jobs were available.[32] This number has most probably grown, and will be likely to increase in coming years. Every indication suggests that the unemployment problem is large and persistent, and that all promising employment policies should be used to combat this problem.

In the overall scheme of things, work sharing should not be ignored as a potential supplement to existing employment policies. However, any deliberate effort to implement work sharing in the near future should be made with considerable caution. Most discussion of the viability of work sharing has been theoretical and speculative. Thus, initial applications should be monitored closely to insure that they fulfill intended goals. Further, it has been noted that many social policies have a point of maximum yield followed by declining returns.[33] Put differently, some public policies may be highly effective when used by participants who are prone to utilize the program, and decline in effectiveness when efforts are made to stimulate use among individuals and institutions less prone to participate. For example, the employment subsidy program may foster high job yield at a relatively low cost among employers who heretofore have been ambivalent about hiring workers with poor employment histories or little work experience. However, efforts to encourage more resistent employers to use the program could result in higher subsidy expenditures for all participants and possibly program abuses. It seems particularly likely that work sharing policies may have levels of participation that provide maximum job creation for minimum cost. Thus, it would seem advisable initially to apply the most promising work sharing approaches among occupational and industrial sectors where they are most easily and inexpensively applicable. Such a "creaming" of work sharing potentials would presumably supplement existing employment policies in the most cost-efficient fashion.

From a long-range perspective, there is reason to believe that ongoing social realignments occurring within the United States will tend to make the general notion of sharing employment increasingly attractive. One of the most important labor market trends of our times is a tendency for an increasing proportion of the working age population to seek employment, but to work less than what we have traditionally called "full time."[34] This trend has important long term social and economic implications. First and foremost, it is essentially a trend toward the redistribution of employment. Second, this trend has emerged from real social problems and emerging aspirations resulting from the increasing number of persons experiencing the time pressures of "dual-earner" family life, growing numbers of retirement age persons who wish to work less than full-time, young and mature students seeking to juggle school with job holding, and those who are simply seeking to shift their life styles toward new balances between work and leisure.[35] These social developments suggest that the desire to work less than "full time" will manifest social and political pressures for a number of institutional reforms allowing individuals more discretion to reduce worktime. Against this backdrop, work sharing proposals are likely to be popular and politically attractive. It is therefore important that efforts be made to determine which, if any, work sharing approaches offer real potentials for effectively redistributing employment.

NOTES

1. Fred Best and James Mattesich, "Short-Time Compensation Systems: The California Experience," *Monthly Labor Review,* July 1980, appendix, pp. 20-22.

2. Gunther Schmid, "Selective Employment Policy in West Germany: Some Evidence of Its Development and Impact," Discussion Paper Series, International Institute of Management, Berlin, July 1978, p. 14.

3. Best and Mattesich, "Short-Time Compensation Systems," appendix, pp. 20-22.

4. This rough estimate recognizes that there will be less than full replacement of foregone worktime with new jobs and that more people may enter the labor force.

5. Fred Best, *Flexible Life Scheduling: Breaking the Education-Work-Retirement Lockstep,* Praeger, New York, 1980, Ch. 4-7.

6. This per worker expenditure was derived from the projection that a "one percentage point higher unemployment rate . . . would increase fiscal year 1981 current law spending for unemployment-related programs by $5 to $7 billion" (*Five Year Budget Projections: Fiscal Years 1981-1985,* U.S. Congress, Washington, DC, February 7, 1980, p. 10).

7. Kenneth Clarkson and Roger Meiners, *Inflated Unemployment Statistics: The Effects of Welfare Work Registration Requirements,* Law and Economics Center, University of Miami, Coral Gables, FL, March 1977.

8. Robert Lampman, "Employment Versus Income Maintenance" in Eli Ginzberg (Ed.), *Jobs for Americans,* Prentice-Hall, Englewood Cliffs, NJ, 1976, pp. 163-183.

9. Harvey Brenner, *The Social Costs of Unemployment,* Joint Economic Committee, U.S. Congress, Washington, DC, 1976; Theodore Marmor, "On Comparing Income Maintenance Alternatives," *The American Political Science Review,* March 1971, pp. 83-96; and *Manpower Report of the President,* 1968, U.S. Department of Labor, Washington, DC, April 1968, pp. 77-80.

10. Citations of comments from leading economists on the use of macroeconomic tools to fight unemployment are Walter Heller, *New Dimensions of Political Economy,* Harvard University Press, Cambridge, 1966, p. 64; Arthur Okun, "Conflicting National Goals," in Ginzberg (Ed.), *Jobs for Americans,* 1976, p. 70; and James Tobin, "The New Economics One Decade Older," Princeton University Press, Princeton, 1974, p. 16.

11. Charles Killingsworth, "Tax Cuts and Employment Policy," in Robert Taggart (Ed.), *Job Creation: What Works?* Olympus, Salt Lake City, July 1977, pp. 1-6.

12. William Branson, *Macroeconomic Theory and Policy,* Harper and Row, New York, 1979, pp. 71-92.

13. Heller, "New Dimensions of Political Economy," p. 64; Okun, "Conflicting National Goals," p. 70; Tobin, *New Economics One*

Decade Older, p. 16; and R.A. Gordon, "Unemployment Patterns with 'Full Employment'," *Industrial Relations,* October 1968, p. 71.

14. *Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives,* Congressional Budget Office, U.S. Congress, Washington, DC, 1975; and Isabel V. Sawhill, "Employment Subsidies and Tax Credits as a Response to Unemployment," *Fourth Annual Report of the National Commission for Employment Policy,* Washington, DC, December 1978, p. 37.

15. Okun, "Conflicting National Goals," pp. 59-84; and Killingsworth, "Tax Cuts and Employment Policy," pp. 1-6.

16. Garth Mangum, "Comments," in Taggart (Ed.), *Job Creation: What Works?* pp. 34-36.

17. Killingsworth, "Tax Cuts and Employment Policy," pp. 5-30.

18. Ibid., pp. 2 and 5.

19. Lloyd Ulman, "Manpower Policies and Demand Management," in Eli Ginzberg (Ed.), *Jobs for Americans,* pp. 85-119.

20. Garth L. Mangum, *Employability, Employment and Income,* Olympus, Salt Lake City, 1976, p. 50; and Thomas Barocci, "Public Works Projects in the United States," in Taggart (Ed.), *Job Creation: What Works?* pp. 99-103.

21. Historic comparison cited from Mangum, *Employability, Employment and Income,* p. 34.

22. Killingsworth, "Tax Cuts and Employment Policy," p. 26; and Barocci, "Public Works Projects," pp. 108-115.

23. The cost per job reflects the skills of hired persons and therefore ranges greatly (Alan Fechter, "Job Creation Through Public Service Employment Programs," in Taggart (Ed.), *Job Creation: What Works?* p. 140). Upper estimates of average cost cited from Barocci, "Public Works Projects," p. 114; and Bill Lawrence, "Kennedy urges $12 Billion Program for 800,000 Jobs," *Sacramento Bee,* June 11, 1980, p. A9.

24. This cost per job estimate includes replacement losses (Sawhill, "Employment Subsidies and Tax Credits," p. 38).

25. Ibid., pp. 36-39; Michael Borus and Daniel Hamermesh, "Study of the Net Employment Effects of Public Service Employment," *Job Creation Through Public Service Employment,* Vol. III, National Commission for Employment Policy, Washington, DC, March 1978; and Orley Ashenfelter, "Current European Manpower Policies," *Fourth Annual Report of the National Commission for Employment Policy,* Washington, DC, December 1978, pp. 57-72.

26. Fechter, "Job Creation," pp. 123-144; and Mangum, *Employability, Employment and Income,* pp. 31-86.

27. For a general discussion of employment subsidies, see Sawhill, "Employment Subsidies and Tax Credits," pp. 21-54; Robert Eisner, "A Direct Attack on Unemployment and Inflation," *Challenge,* July-August 1978, pp. 49-51; and John Bishop and Robert Lerman, "Wage Subsidies for Income Maintenance and Job Creation," in Taggart (Ed.), *Job Creation: What Works?*

28. Sawhill, "Employment Subsidies and Tax Credits," pp. 37-39.

29. Ibid., pp. 38-39.

30. Moses Abramovitz, "In Pursuit of Full Employment," in Eli Ginzberg, (Ed.), *Jobs for Americans,* pp. 8-36.

31. Fred Best, "Work Sharing: Its History, Relevance, Viability and Future," unpublished paper prepared for the National Commission for Employment Policy, Washington, DC, December 1978, pp. 27-28.

32. Eli Ginzberg, "The Job Problem," *Scientific American,* November 1977, pp. 43-51; and Eli Ginzberg, "Introduction: The Purposes of an Economy," in *Jobs for Americans,* p. 3.

33. Peter Rossi, Sonia Wright and Howard Freeman, *Evaluation: A Systems Approach,* Sage Publications, Beverly Hills, CA, 1979.

34. As a general illustration of this trend, the labor force participation rate has increased from 59.4 percent in 1960 to 63.2 percent in 1978, and is projected to rise to 66.2 percent by 1990. Correspondingly, the average workweek, which is not the only indicator of worktime reduction, declined from 38.6 to 35.8 hours between 1960 and 1978.

35. Sar Levitan and Richard Belous, *Shorter Hours, Shorter Weeks: Spreading the Work to Reduce Unemployment,* Johns Hopkins University Press, Baltimore, 1977, pp. 6-55 and 74-85.